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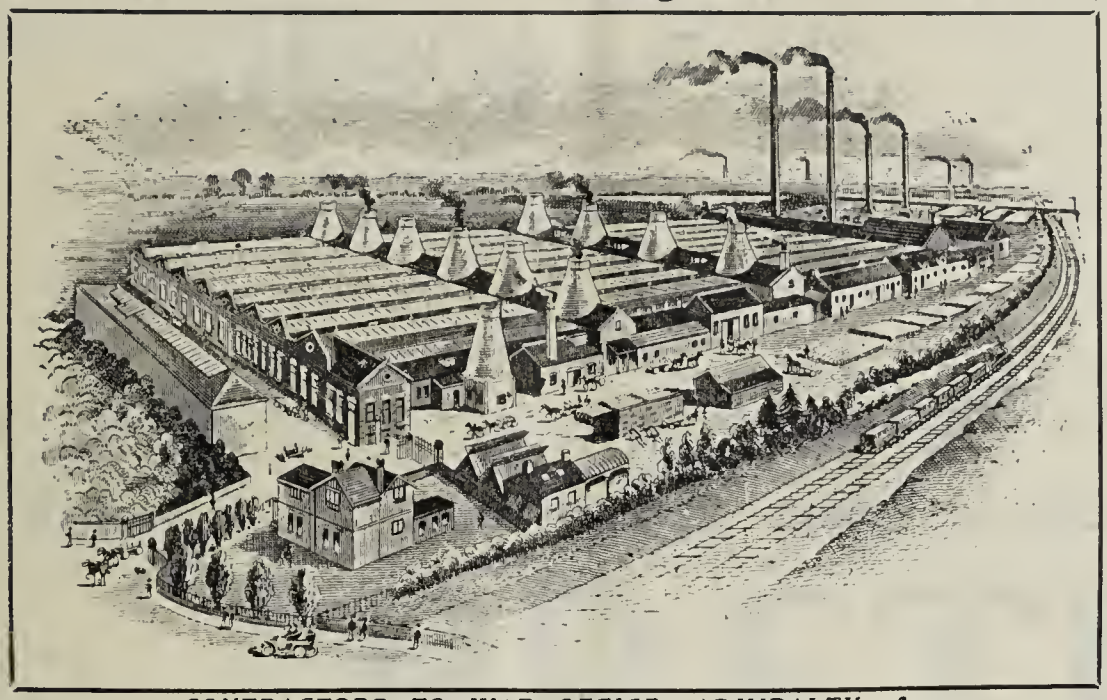
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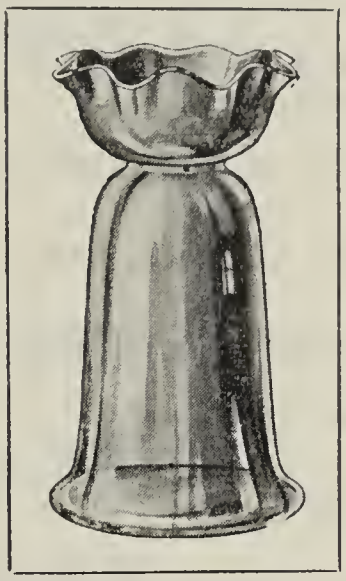
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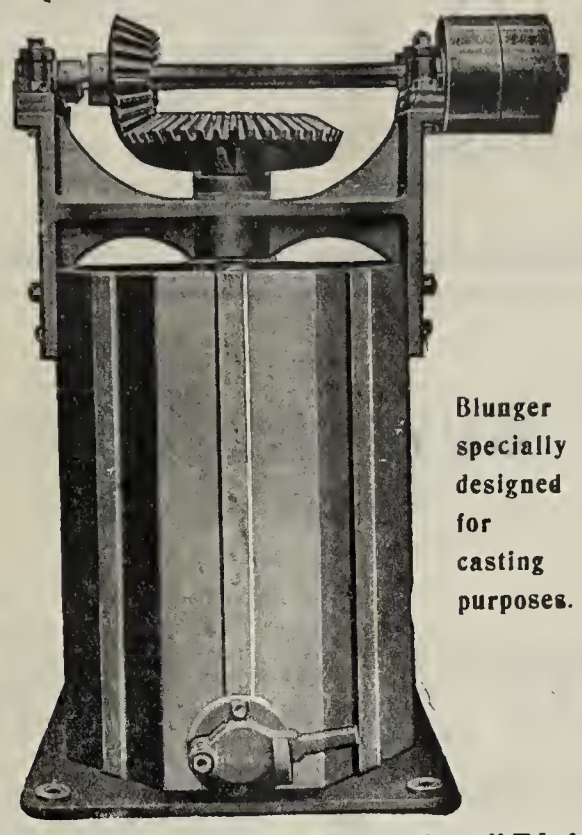
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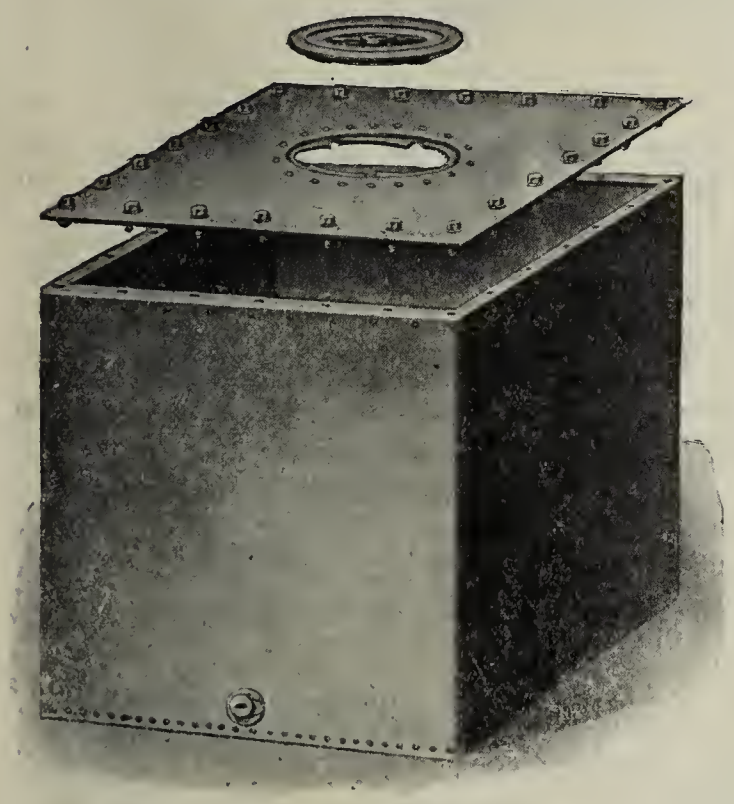
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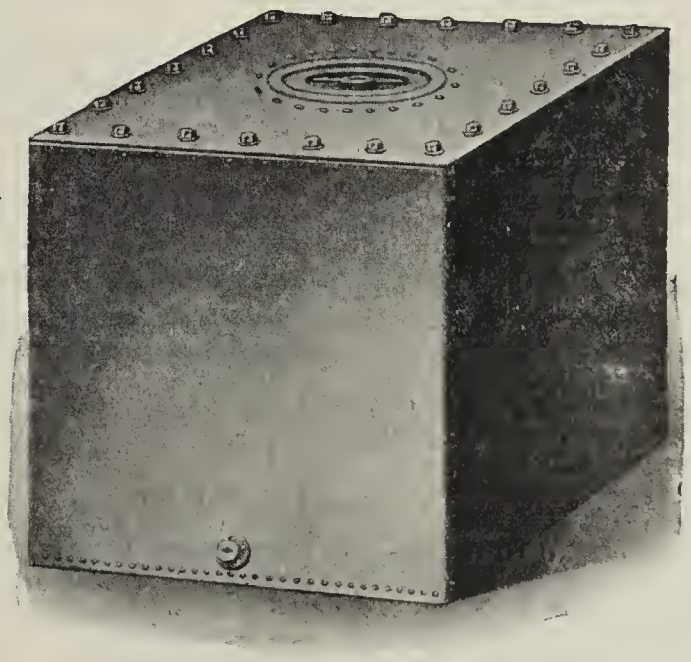
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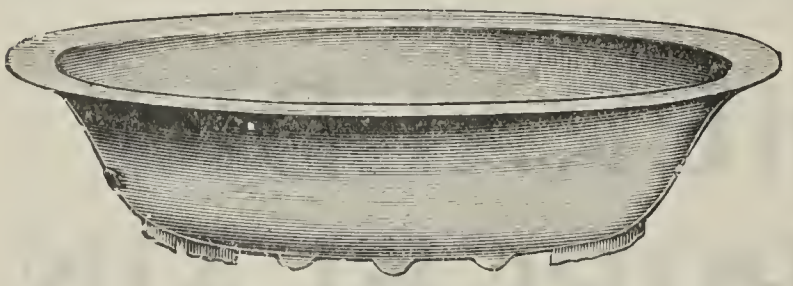
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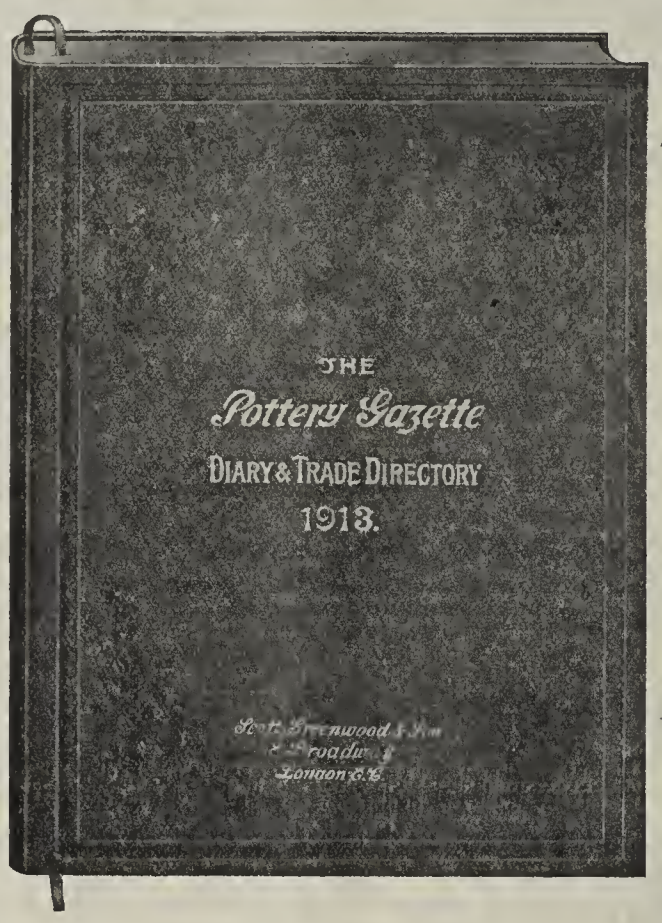
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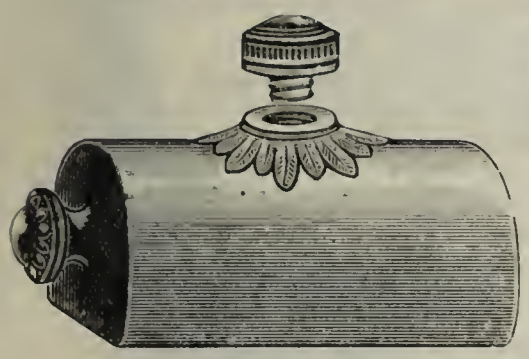
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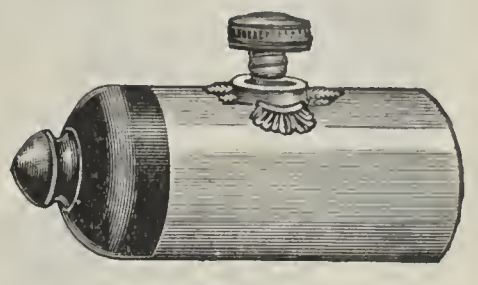
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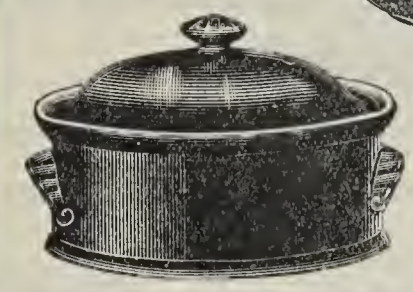






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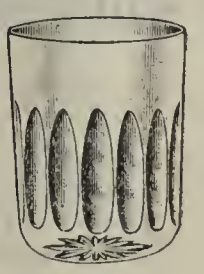
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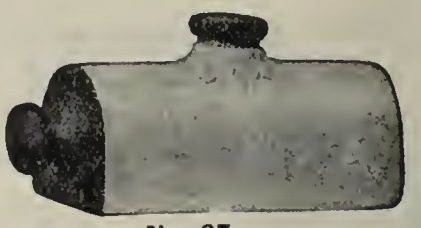
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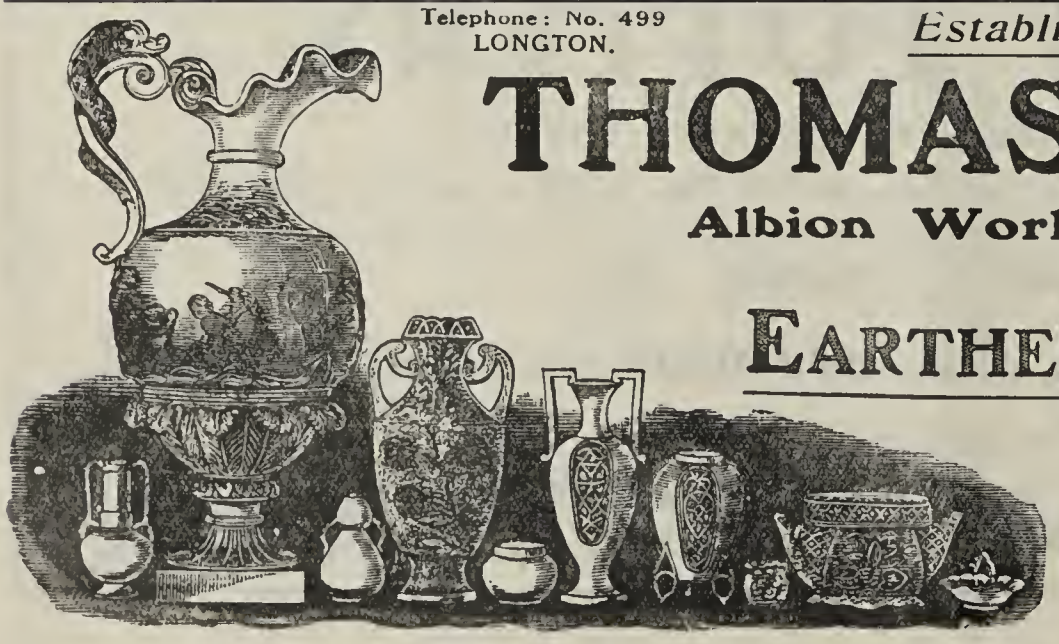
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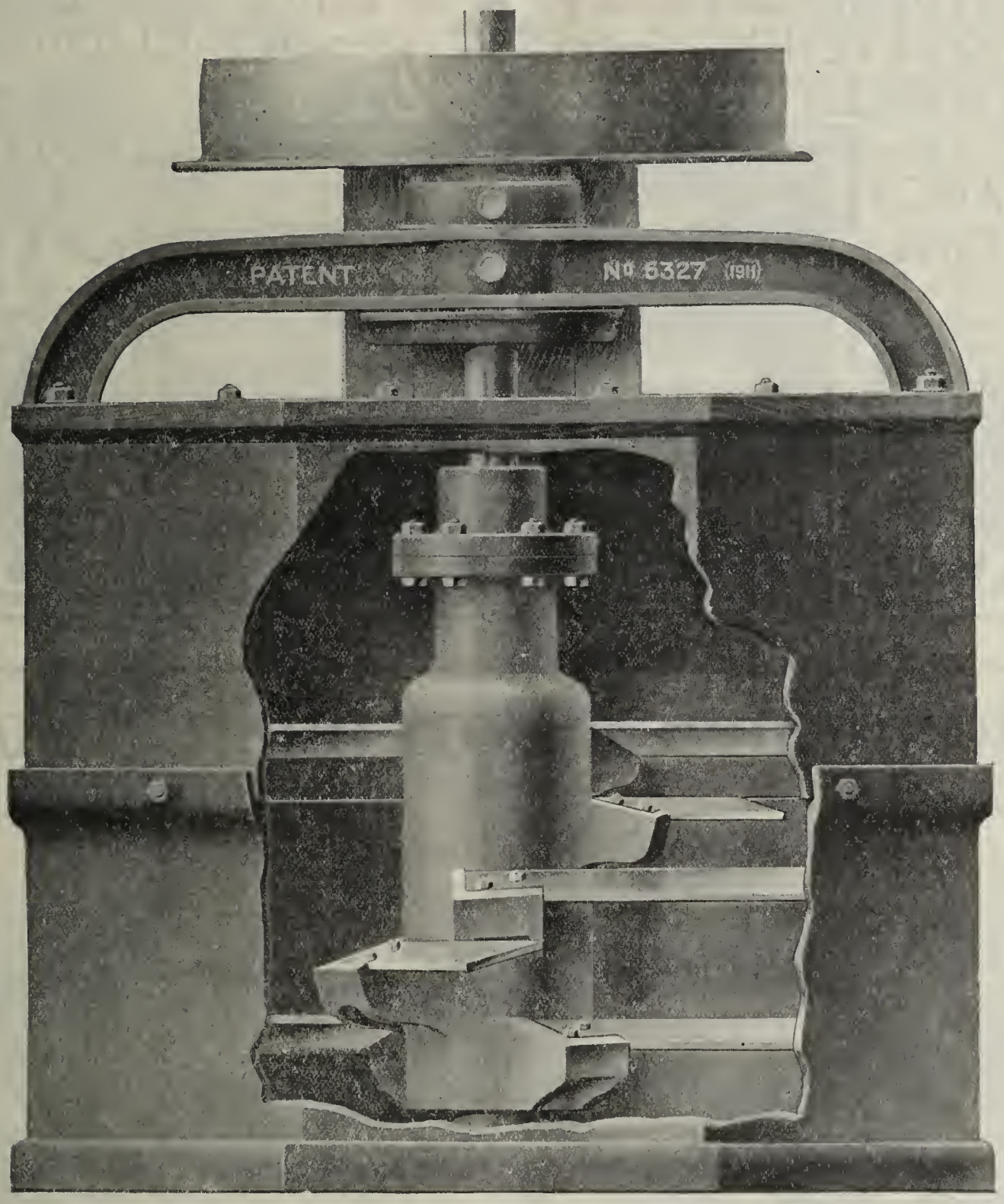
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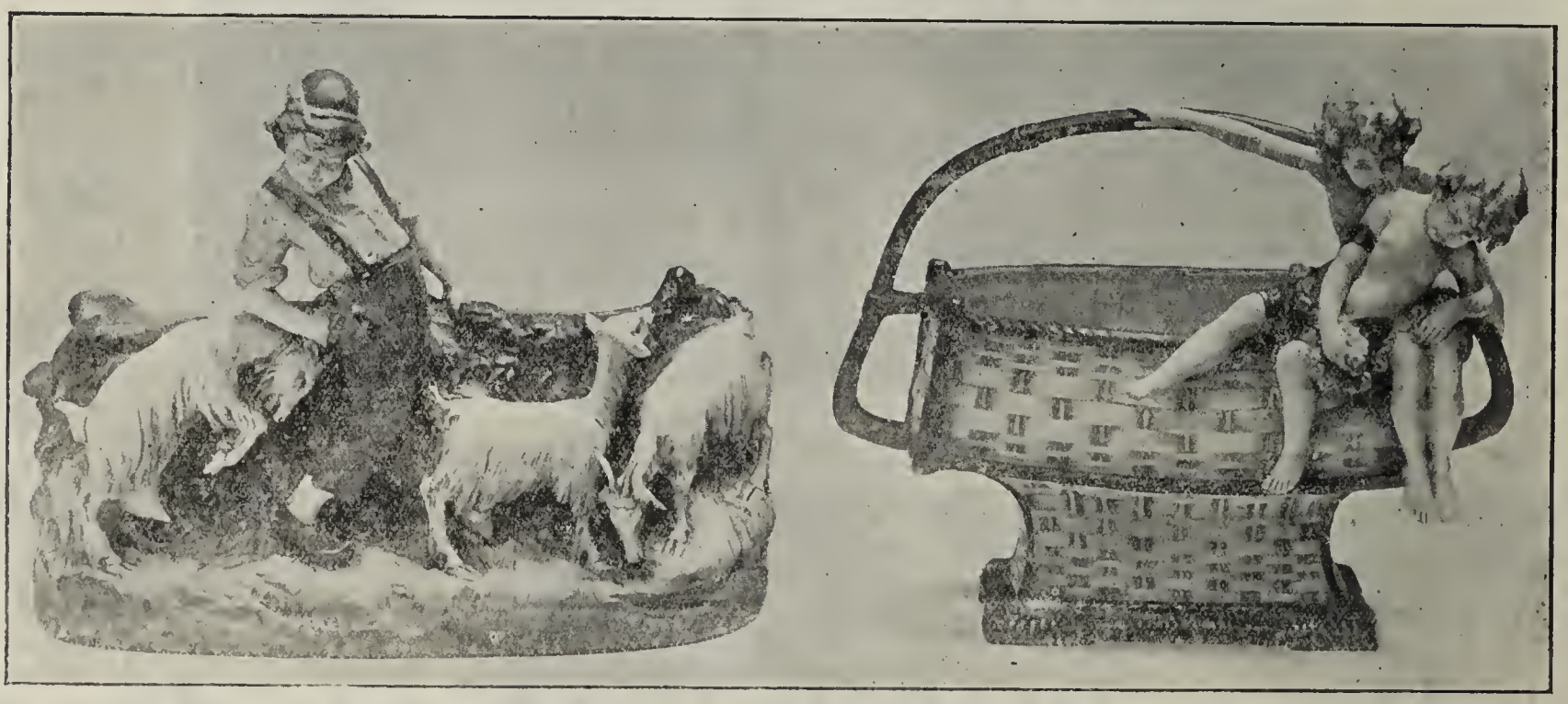


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PUBLISHERS' NOTICE
TO
COLONIAL SUBSCRIBERS.

From January 1, 1913, the Indian and Colonial Subscription Rate to THE POTTERY GAZETTE will be the same as for Foreign Subscriptions, viz.. **10/-** per annum post free, including DIARY. The annual Subscription for Canada will therefore be **10/-** instead of **7/6**, and for India, Australia, and all British Colonies, **10/-** . . . . instead of **8/-**. . . .

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We wish all the Readers of "The Pottery Gazette" A Happy and Prosperous New Year.

Editorial Notes.

A NEW PRIZE COMPETITION.

HAVING found that the prize competitions which were organised in connection with THE POTTERY GAZETTE in 1911 and 1912 were welcomed by our readers, and were undoubtedly productive of benefit to the trade, we have devised another for the commencement of 1913.

We offer a first prize of £5 5s. and a second prize of £3 3s. for the best appreciations of any lines of goods advertised in our issues of February and March next, subject to the following conditions :—

The appreciations must not exceed 500 words in length ; they must be plainly written on one side of the paper only, and must reach our offices not later than March 15, 1913. The competitors must be subscribers to THE POTTERY GAZETTE or in the employ of the subscribing firms ; they must have personal experience in handling the goods described ; and they must have no interest, direct or indirect, in the firm making the goods. A declaration to this effect must accompany the competing contribution. Manufacturers may only compete with regard to materials and accessories.

The decision of the Editors of THE POTTERY GAZETTE with regard to the awards shall be final, and they shall be at liberty to publish all or any of the contributions in the columns of the GAZETTE.

We trust that the above offer will prove of advantage both to our advertisers and to our subscribers. We hope to announce the result in our April Special Issue.

A TRADE INDEX FOR 1912.

INCLUDED in this number is the Index to THE POTTERY GAZETTE for the past year, and this, as a guide to the contents of the representative magazine of the pottery and glass industries, forms also an index to the principal trade events during the past year. A reference to some of the most conspicuous items will therefore constitute a review of the chief trade events of the period.

The coal strike stands out prominently as a predominating influence, and some of its consequences are still with us. It was a grievous trial to all concerned, but it was manfully faced, and all members of the trade united in the endeavour to neutralise as far as possible its ill-effects.

Perhaps the item next in importance is the putting forward of the new special rules for potteries. This, again, is an incident that is being made the best of by the manufacturers whom it affects. While legislation has affected the pottery branch, the glassmakers have had their own special difficulty in connection with the State regulation of boy labour.

The Strike and the new Rules, as well as the Insurance

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Act, and the rising cost of raw materials, have led to an upward tendency in the selling prices of all kinds of ware; a movement that is likely to continue during next year. The adjustment of the charges has led to a certain amount of friction between manufacturers and dealers, as has been recorded in our columns, but happily it is likely to be relieved by mutual concessions.

The activity of the technical side of the industry, in endeavouring to find new and more economical materials and methods, is reflected in the number of scientific papers and articles, and descriptions of new apparatus which we have published.

Ample evidence is on record of the beneficial activities of the various trade associations and societies, whose proceedings we have fully reported. The Benevolent Institution, in particular, has been decidedly progressive during 1912.

A regretful interest is found in the long list of obituary notices. The casualties among the trade veterans have been very heavy, and have left many gaps in the ranks which it will, indeed, be difficult to fill.

On the whole the year's trading is generally regarded as satisfactory. Our extensive Empire Notes and Foreign Notes show that overseas trade especially has received unstinted attention.

Finally, we would refer to the statistical tables, special and illustrated articles, trade reports, answers to correspondents' inquiries, reviews and interviews, accounts of shops, prize competitions, Legal and Gazette Information, &c., only to say that in the coming year we shall endeavour to maintain the prompt and efficient journalistic service which we have found to be so well appreciated by the pottery and glass trades. This appreciation has been amply proved during the past year by careful canvassing, which shows that practically every dealer of importance in these trades in the United Kingdom is now subscribing to THE POTTERY GAZETTE.

BUSINESS THAT IS NOT WORTH DOING.

RECENTLY, when pottery manufacturers were full up with orders and their customers were clamouring for supplies, there was, no doubt, a good deal of shrewd selection going on as to who should be first served. Preference was given to those with whom satisfactory relations had been maintained, and a delayed delivery often became a means of paying off an old score on account of undeserved complaints, "long-winded" payments, or unfair deductions.

This process of selection, natural enough at times of stress, might well be extended to become a general rule in the business of both the manufacturer and the retailer. For it is certain that there are some conditions in all trades under which satisfactory business can never be done, and the sooner the persons practising them are made aware of the fact the better it is for all parties concerned. We have in mind a case which occurred in an industry allied to those represented by THE POTTERY GAZETTE. A certain firm invited quotations from a manufacturer, but received a reply to the effect that he had quoted them several times before for similar goods without receiving an order, and as there was no change in his prices, and he was extremely busy, it was not worth his while to go to the trouble of pricing out a specification, as it was evident that he was not able to meet their requirements. Of course, for such an independent course of action he needed to be very sure of his ground; but it gained him the respect of the firm in question, and made them even more desirous of obtaining supplies from him.

If our friends in the pottery and glass trades would make a firm stand in similar cases, as well as in dealing with the slow-payer, the crotchety grumbler, the over-reaching driver of hard bargains, the chronically-impecunious, the man whose trade needs lubricating with liquor or palm-oil, the price-cutter, the business bully, the shifty, unreliable excuse-monger, and all the other trade undesirables who have to be encountered, they would, while maintaining their dignity and that of their industry, save themselves and their fellow-traders a vast amount of trouble in the future.

TRAVELLERS AND THEIR CLIENTS.

A LETTER in our "Correspondence" columns opens up a question of very considerable importance to the commercial community. The increasing tendency to render the heads of large business concerns inaccessible to the traveller needs checking in these days, although it is very difficult to see what measures can be taken to check it effectively. Those who have any long experience of business affairs are quite aware that it was very much easier to get into communication with the principals in any business thirty or forty years ago than it is now, and the causes of the change are roughly known. One of these causes is the great multiplication of travellers, canvassers, &c., and another is the decline in the status of these commercial emissaries. When one considers this phase of the subject, it is not at all surprising that checks have been devised to prevent access to the heads of great firms. There are cases where, if it were not so, the whole day might be consumed in giving audience to travellers. At the same time, in many parts of the country, the methods adopted to prevent the undue worrying of principals by the travelling fraternity are stupid. In the North of England this is particularly the case; and there are great firms to which it is utterly impossible to communicate anything, however valuable it may be, or however suitable for their consideration. We have in mind several large establishments with which the only means of communication is through the medium of stupid or saucy lads from ten to twelve years of age.

We would suggest that in all important businesses, where it is impossible for the heads of departments to interview callers indiscriminately, a special travellers' department should be set up, controlled by intelligence and courtesy, where the traveller should have an opportunity of showing whether or not he was worthy of further consideration.

There can be no doubt that while time is saved by the present restrictive method, so far as the buyer is concerned, innumerable cases must occur where the advantages of competition are lost, and where the opportunities for taking up profitable novelties are thrown away; and it has to be remembered that the time which is saved by the buyer, even were there no drawbacks to him, is fully counterbalanced by the time which is lost by the traveller. This is very great in the aggregate, although one cannot altogether admit with the head of the big American corporation that it would suffice, if properly used, to make us all millionaires, even if that were a consummation to be desired.

The inaccessibility of the buyer leads also to other disadvantages, amongst which is the temptation on the part of the traveller to ease his way by gifts which it is difficult to distinguish from bribes. The beginning of much bribery is to be found in the fact that the seller of a good thing cannot obtain the chance of making it known to the buyer by legitimate means. It is almost always disastrous when business has to be conducted through a

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chain of underlings; and with the rapid amalgamation of small firms into large firms and of large firms into trusts and combines, the scope for commercial corruption steadily increases, while legislative attempts to check it are always more or less futile.

The whole question is no doubt a very difficult one, and we do not profess to deal with it exhaustively on this occasion; but it is a matter which well deserves the attention of all commercial men, and will repay any consideration which may be given to it.

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE meeting of the English Ceramic Society, held on Saturday, Dec. 14, in the lecture room of the Hanley Municipal Secondary School, was devoted to the consideration of a number of questions which had been submitted privately by various members through the secretary to the "Question Box." The procedure followed in dealing with these was precisely the same as that adopted in former years, the opening of the discussion in each case being deputed by the secretary to individual members likely to be in such a position as to be able to furnish reliable information on the subject submitted to them for solution.

This year five questions had been received: (1) What is the cause and cure of blibs in bone china casting slip? (2) What is the cause of the curling of enamels, particularly celeste? (3) What is the fur found on moulds used for casting slips? (4) What is the cause of cracks in the centre of plates? (5) What method or methods should be adopted in firing to prevent the spurting out of wad rolls and saggar bottoms?

The first subject on the paper was introduce by Mr. H. W. Edwards, who said that "blibbing" was the effect caused, he need hardly explain, by the bubbles which were always present, more or less, in bone china casting slip, depositing in the pieces of ware during casting. These mostly appeared on the inner surface of the article when the remaining slip was poured from the mould. They might, he considered, divide the answer into two parts, firstly, methods which would tend to remove the blibs from the slip, and secondly, methods which would help to prevent their formation. In respect to the first, some manufacturers claimed that they were never troubled by the fault, but he had usually, on inquiry, found that such firms only made larger pieces and employed all journeymen. From his own experience he found that in fettling the work of journeymen there was hardly any need even to rub the inner surface to remove any blibs, but in fettling from women and girls the cheaper articles, such as cups, &c., this item was a serious one. The careful stirring to which a good journeyman subjected his slip before casting removed any blibs which might be present. As to the second part of the question, that dealing with prevention, he had always found that this trouble varied very considerably, sometimes the slip being almost free, and perhaps the very next mixing being practically full of blibs. If the source of the blibs could be fixed it might be possible to prevent their formation in the slip. It was well known, of course, that certain grades of bone made a very frothy slip, and naturally the china body made from such bone would have this fault excessively. From certain experiments that had been made it would appear that this frothiness was due to the fermentation of the organic matter in the bone, and it might be that if this process of fermentation was stopped by some addition to the bone, the fault could be prevented to a very large extent.

In the discussion which followed Mr. Edwards' solution to the question several views were advanced. One member suggested that the blibs, in his opinion, were almost entirely, if not entirely, admitted into the slip by the workman in the operation of stirring with a stick, and that if this could be overcome, the trouble would cease. A good way of getting rid of the blibs would be to heat the slip slightly, which would rid all blibs from the mould. He had seen this done with very delicate porcelain, a vitreous body used for the making of white figures, worse than china slip.

Another member suggested that one of the best means of obviating blibs in china casting slip was to have several stand tubs, and to allow the slip to stand in these tubs for two or three days, longer if possible, at the end of that period skimming off the water, blunging the slip up again, allowing it to stand a little longer, and then repeating the skimming. This process would, he said, result in a very material lessening of the fault.

Dr. Mellor submitted that there was a difference between the earthenware slip and the china slip mentioned by the two speakers. A china slip which had been allowed to stand for some time, as they all knew, would emit a very strong smell, indicating a process of fermentation such as Mr. Edwards had suggested. Under the microscope a very complex collection of living beings could be observed feeding on the slip, and, of course, generating the bubbles, some very brilliant coloured animalculæ being discernible.

Two questions were raised by other speakers, one as to whether the methods in vogue for dealing with earthenware casting slip, viz., the use of alkalies and the liquefaction of the clay, could, or could not, be applied successfully to china; and the other as to what would be considered a suitable addition to the slip to prevent decomposition, or to cause the decomposition to take place rapidly.

Mr. Edwards, replying to the various speakers, said that he did not agree with the remarks of the first speaker that the bubbles were almost entirely admitted into the slip by the workman in the action of stirring, though this would, of course, accentuate the trouble. The action of the stick would certainly attract the bubbles together, and as they congregated and became larger, they would arise more freely. In the case of journeymen they considered the action; the women and girls employed a rougher style, which called for his remarks on this point.

With regard to the suggestion of the second speaker as to standing, after all due allowance had been made for this he (Mr. Edwards) found that the slip still varied very much. This remedy was, therefore, only a partial one.

It was certainly correct, as Dr. Mellor said, that a good deal of small was experienced after allowing bone china slip to stand for a time, proving growth in the slip.

As to the use of alkalies with china slip, on the whole this was, he believed, favourable, but the addition of sodium silicate was not successful at all.

Answering the point as to suitable additions to the slip to prevent decomposition, formaldehyde might be suggested as one, but, of course, there was a variety, and it was desirable that experiments should be made with other substances in this connection.

Mr. F. Jones dealt with the question "What is the cause of the curling of enamels, particularly celeste?" He said he was afraid he would be unable to answer this question summarily, and specify any one particular and definite cause, for there were a number of causes which he thought might contribute to this fault. It had been suggested to him by a manager of one of the most representative places that curling might be set up either by undergrinding or over-grinding of the colour. So far as undergrinding was concerned, he (Mr. Jones) did not attach very much importance to that view, as it was a point which could be so easily detected by the people who had to handle the colour, and so easily rectified. So far as overgrinding was con-

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cerned he really could not tell. There were two causes which he had found to be really definite in regard to this fault, and they were: the result of the cooking of fatty meats either within the workshop in which enamel colours were used, or in close proximity thereto, and the handling of the ware by perspiring hands. The result of these circumstances was also very definite in regard to other colours than celeste and turquoise, which had to be laid on thick. In thin films of lustre, for instance, which, of course, did not boil up and show this curly appearance, instead of producing the appearance of a gold deposit such as was aimed at, the colour would be turned almost black. Another important consideration was the oil used for the working of the colours. Years back manufacturers employed for this purpose a product obtained from the evaporation of turpentine, which would be fairly emulsifying. Latterly, however, more economical media had been utilised, such as turpentine and resin, tar and resin, &c. Now, if some of these things were not properly combined, and there was a resinous part or two left in the mixture, that might be expected to boil up and cause trouble. Practical experience had shown that there was one other very important point in connection with this curling, and that was the ill effect of taking ware from the shops, and placing direct into a hot kiln, without first allowing the volatiles to escape before finally closing the kiln, and applying the real soaking heat. This, he thought, was one of the greatest factors in producing curling. Concluding, Mr. Jones said that it was, of course, somewhat difficult to determine just how the trouble was to be overcome, as every place had its own life. Very often when one sought to carry out something on exactly the same lines as someone else, something would happen which was entirely unexpected. But he had given them the results of his own practical experience. In diagnosing a fault there was one way of approaching it which he had found extremely useful. "When you find a fault," he said, "and you have used all the brains you are possessed of to find out the cause, and you cannot do so, one of the most useful methods to adopt is to use a sort of synthetic, try to produce the fault." Only within the last fortnight he had had to deal with a number of experiments, and he had found that course to be most beneficial, and quite unexpectedly had overcome certain troubles which he was experiencing, and which might otherwise have continued to puzzle him greatly.

The first speaker to discuss Mr. Jones's remarks coincided with what had been said in regard to the fat oils used. Whereas these were formerly evaporated in a workshop, now they had to be bought. One did not know what one was buying, and very often impurities were there which ought not to be there, very probably in the direction of resinous matter. With regard to the grinding, he did not think that that applied very much, because he had noticed the fault arise with one particular kiln, whereas the kilns immediately before and after had been perfectly good. The trouble had been noticed particularly where a kiln was fuller than usual with aerographed goods, also when the fireman had given a "slow, dragging fire."

A considerable amount of discussion ensued as to whether it was really a slow or a rapid fire which gave the fault. It was thought that the remarks of Mr. Jones and the subsequent speaker did not agree. Mr. Jones explained, however, that he did not mean that the ware was to be given a slow fire, but that an aperture should be left in the kiln until the end of that period when the absence of stench indicated that the volatiles had been driven off. The kiln should then be finally closed, and the firing proceeded with as rapidly as possible.

Another speaker considered that Mr. Jones had raised a very pertinent point here. It seemed to him that a very great deal of loss in enamel ware was due to the methods employed almost throughout the whole of the district. If, instead of drawing a kiln in the morning, re-setting it, and firing it again straight away, they could arrange to set their kilns in overnight, and start them the following morning, much better results, he was sure, would accrue.

Mr. Jones replied that he was certain of it. He had found this to give a great improvement in regard to many things. It was just possible that even the kiln sides might have imbibed something during firing which they would retain so long as that kiln remained hot, but which might be given off during cooling.

The discussion also turned upon the question of overgrinding. Several members were of the opinion that the colours might be ground too finely, resulting in curling, and that this trouble might arise in very much the same way as with a too finely ground glaze, or a glaze overburdened with china clay.

Mr. W. H. Cyples, who was appealed to for his views on the subject from the point of view of the colour-maker, said he was afraid he had nothing to add to the discussion. He felt that all the causes mentioned might be contributory to the fault. Colour-makers had usually been taxed with undergrinding, but he thought there was a danger of overgrinding. Speaking particularly with regard to celeste, he considered that this, although cheap, was an awkward colour to handle, because, although it took a good fire to fuse it, there was a danger of overfiring. The danger of underfiring was, however, perhaps the greater.

The question, "What is the fur found on moulds used for casting slip?" was answered by Mr. H. Steele, and led to very little discussion. He said what he understood by fur on plaster moulds was that curious, feathery, crystalline substance which "grew" on moulds when casting slip containing sodium salts was used. Analysis showed that these crystals contained sodium sulphate. This proved what would be the hypothesis of the chemist before verification that the sodium salt or salts from the casting slip, being carried in solution into the pores of the plaster, had reacted with the calcium sulphate to form sodium sulphate. Now they knew that sodium sulphate had the property of penetration to a marked degree. On the table would be seen a basin which had been allowed to contain a quantity of sodium sulphate for about a week. The crystals had formed on the outside of the basin, and if left sufficiently long would disintegrate the basin into pieces. He thought that here there was a possible suggestion as to the reason for the detrimental effect casting slip exerted on moulds where the slip was liquified with sodium salts.

An observation was offered that a fur occurred on moulds where soda slip was not used. Calcium sulphate was, of course, soluble to a certain extent, and when the moulds became saturated with water, this calcium sulphate would also cause a scum.

Mr. Steele replied that that was quite correct, but he would point out that sodium compounds were always found in the sliphouse water. Such a scum, however, would not appear to the same degree as on moulds where soda slip was used.

The question, "What is the cause of cracks through the centre of plates?" was entrusted to Mr. A. G. Richardson, and resulted in an animated discussion. The question had been accompanied by a number of plates showing minute cracks in the centres, and before offering his solution, one of the plates, which was still whole, was broken by Mr. Richardson before the members, as a result of a very slight tap with a pocket knife. This, he said, was quite what he expected it would do, and

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followed up his experience with the others, which had behaved in exactly the same way.

Mr. Richardson said it was to be hoped that the person who had submitted those plates had found out the reason of it before then, otherwise he might not have sufficient money left to pay for his insurance stamps. The cracks were apparently due to dunting, not the dunting due to too rapid or irregular cooling, which, in the case of earthenware, caused a fracture with a smooth, glassy surface, but a form of dunting due to a strain set up by a disagreement between the body and the glaze. In this case the disagreement seemed to be due to some fault with the flint used in compounding the body. It would be noticed that the fracture across the broken plate was rough, and quite unlike the usual cooling dunt. Having no information as to the condition or quality of the flint used, it was difficult to suggest the particular cause of the fault. Such a form of dunting had, however, been traced to the overgrinding or overcharging of the flint used in the body, and also to the short calcining of the flints. Inferior flints also caused this form of dunting, especially grey flints, and cases were known where the trouble had been definitely experienced with grey flints, but had passed away immediately black flints of good quality were used, At the present time there was an acknowledged difficulty in obtaiuing a good quality of black flints except at a high price. The use of an inferior quality of flints, containing a high proportion of grey pebbles, would cause such a fault as shown on the plates produced. The quality of the flint as to its dunting properties could not be detected by firing a sample in the ordinary way, nor could any marked difference be noticed in the slop pint, except in the case of short calcined flints, when the slop would appear thinner at the standard weight per pint. The colour and shrinkage would probably be as satisfactory as that of the flint not producing dunting. He suggested then that the fault might be removed either by using flint which was not overground, short calcined, or of inferior quality, or taking care to introduce only the correct proportion of flint in the body.

Several theories were advanced by speakers who took part in the subsequent discussion as to the reason for the cracks. One suggested that the cracks were clay cracks, another that they had been caused by the tower, another that they had been caused by undue depression of the tail of the tool in making, and yet another that they were due to the undergrinding of the grey portion of the flints. In fact, nearly an hour was spent in considering the various theories.

When at last Mr. Richardson got up to reply, he dealt exhaustively with the whole of the points raised. He sought to explode the theory of the cracks having been caused in the clay or by towing by suggesting that a plate with a clay crack, and passed through the glost oven, could not be broken in the way in which he had broken the plate before them. With regard to the theory as to irregular pressure having been exerted by the tool, at any given point, he could not see his way to accept it, because it was a long time since he had seen a better potted plate, considered from the point of view of uniformity of thickness. He had yet to learn that an irregular thickness across the bottom of a plate was a sign of good potting, and he certainly did not think irregular thickness was necessary to the production of a good plate. In any case, irregularity of thickness would not overcome the trouble with which he was then dealing. If there was anything in the suggestion that irregularity of pressure by the tool was a cause of dunting, it was not to be found in the plates before them.

With regard to the question of black versus grey flints, he was not just then prepared to give a reason for the difference in the behaviour of the two qualities. He had an idea in regard to it, but he would, for the time being, confine himself to facts gathered from experience obtained in the Potteries. Certain it was that grey flints caused trouble of this sort, and black flints got rid of it. It was also indisputable that overgrinding of the flints would cause dunting, and cases had been known where the flint was so excessively overground that the ware had shattered as it was taken hold of from the saggar in drawing the oven, and in other cases where it would not stand its own weight in the warehouses. In such cases, when the flint had been tested for fineness and afterwards properly ground, the trouble had passed away. He had never heard it suggested that dunting was caused by undergrinding. Some years ago Mr. Turner, in the laboratory at Tunstall, had proved that excessive fineness of flint would cause dunting and peeling, and that coarse ground flint would give crazing. He could not, therefore, see his way clear to modify the solution he had given to the question before him.

The last question on the paper, "What methods should be adopted in firing to prevent the spurting out of wad rolls and saggar bottoms?" was dealt with by Mr. A. Leese, who is usually at home with such matters. He claimed that, as with a biscuit oven, one would say at once they must fire slower, allowing the mouths of the oven to clear, and so that an oxidising atmosphere might permeate the whole oven, but as it was a general rule in glost firing to proceed with the firing as quickly as possible, any prolongation of the firing would at once be ruled out of court. Consequently they must turn their attention to the materials. He should think that the greatest trouble would arise from the wad clay. The placers and all concerned would doubtless prefer the toughest clay procurable ("Tough Tom"), for several reasons, e.g., tenacity when in lengths, adhesion to saggar tops, better sealing in clay, and quicker application, by reason of the clay not breaking into short pieces. A too plastic clay tended to fusion of the surface at a lower temperature than was necessary to melt or fuse the glaze on the ware firing in the oven, and this enclosed the air and impurities in an early stage of the firing. Upon further application of heat, the expansion of the enclosed air, and the accumulation of gases evolved from the undecomposed rock, exercised a great pressure upon the crust of the rolls, and as the temperature rose, the crust of the clay, being unequal to the increased pressure, suddenly exploded, the result being that any loose particles, feeling themselves relieved of pressure, spurted out, striking the ware in their flight. He thought that, instead of depending upon the underground rock or marl, with these impurities, to act as grog, it would be better to grind the clay to a greater degree of fineness, and then add fine or dust grog in proper proportions, passed through a sieve. With regard to the saggar bottoms, although they contained a certain amount of grog, they were usually coated with glaze, causing vitrification, and enclosing air and gases which were generated round the small pieces of unground rock, and which, with the expansion of the impurities, were all bent on making their way in an outward direction, causing all sorts of trouble. By grinding the marl to a finer state, they would not only reduce the size of these undesirables, but would, by the extra time employed, allow the impurities a decided chance of a more even distribution over the whole, and would thereby be imitating some of the qualities of the same clay if it had been allowed to be properly weathered. It was certain that this neglected marl question was responsible for a vast amount of trouble, both in the direction of the quality of ware produced, and the wholesale destruction of saggars, causing much trouble to fall upon the firemen and others concerned, who were in the same difficulty as their employers

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for this reason, that it was rarely known what amount of adulteration had been added to a given strata of marl by the frequent slips or slides in a marl-hole. Then they had also to consider the saggar maker or grinder, who treated all qualities of clay alike, and added just the same amount of grog, whatever the appearance, and however the marl might differ from time to time. They had here two selfish or natural elements to contend with: firstly, it was the aim of the saggar-maker to gradually reduce both the size and the quantity of grog, for the sake of his bones; secondly, the firemen generally set about to reduce the number of hours firing. If these two important men could be induced to take up the pottery classes, it would be the only means of causing them to reason within themselves that a good deal of their work was in direct opposition to the welfare of the particular works at which they were employed.

Other speakers contributed to the discussion, and altogether a very interesting time was spent. One of the members suggested that if it were better known that the Society existed for the purpose of mutual help in these little matters which were of extreme importance sometimes to the potting industry, it would become increasingly popular, and result in a larger membership roll.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE POTTERY TRADES.—The monthly report in "The Board of Trade Labour Gazette" shows that employment in the pottery trades in November continued good, and was better than a year ago. Returns from firms employing 19,170 workpeople in the week ended Nov. 23 showed an increase of 0·6 per cent. in the number employed, but a decrease of 0·3 per cent. in the wages paid, compared with a month ago. Compared with a year ago there was a small increase in the number employed, and an increase of 4·8 per cent. in the total earnings.

In the Potteries employment continued good, and was better than a year ago; packers, however, reported a little short time. In other districts employment was good generally. Clay tobacco pipe makers at Manchester also reported trade as good.

The following table gives the number of workpeople employed in the several branches of the trade, and the amount of wages paid them for the week ending Nov. 23, 1912:—

Branches.	Number employed.	Wages paid.
China manufacture	3,172	£3,685
Earthenware manufacture ...	12,026	11,920
Other branches (including unspecified)	3,972	3,720
Total	19,170	£19,325

The number of workpeople employed in the several districts, and the amount of wages paid them in the week ending Nov. 23, 1912:—

Districts.	Number employed.	Wages paid.
Potteries	14,427	£14,038
Other districts...	4,743	5,287
Total	19,170	£19,325

THE GLASS TRADES.—Employment during November was good, and rather better than in the previous month. It was better than a year ago, especially with bottle makers. Returns from firms employing 8,158 workpeople in the week ended Nov. 23 showed an increase of 0·8 per cent. in the number employed, and of 1·0 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 8·0 per cent. in the number employed, and of 11·0 per cent. in the amount of wages paid.

Employment with glass bottle makers was good generally. In Yorkshire and the North of England it was better than a month ago and a year ago, while at St. Helens and in Scotland no change was reported. At St. Helens employment was fair with sheet glass flatteners and cutters. At Birmingham it was fair with flint glass makers; with flint glass cutters and plate glass bevellers it was good, overtime being worked. At Wordsley and Stourbridge it continued good with flint glass makers, and very good, with overtime, with cutters. Pressed glass makers on the Tyne and Wear reported it as very fair, and glass blowers in London as good.

Table showing the number of workpeople in the different branches of the trade, and the amount of wages paid them in the week ending Nov. 23, 1912:—

Branches.	Number employed.	Wages paid.
Glass bottle	5,692	£7,713
Flint glassware (not bottles) ...	1,819	2,196
Other branches...	647	735
Total	8,158	£10,644

The number of workpeople employed in each district, and the amount of wages paid them for the week ending Nov. 23, 1912:—

Districts.	Number employed.	Wages paid.
North of England	858	£1,127
Yorkshire	4,775	6,394
Lancashire	551	684
Worcestershire & Warwickshire	960	1,196
Scotland	653	851
Other parts of United Kingdom	361	392
Total	8,158	£10,644

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PERLUX. 346,724. Glass shades. Class 15. The General Electric Co., Ltd., 67, Queen Victoria-st., E.C.

BARRISTER. 346,552. Porcelain and earthenware. Class 16. Abel, Aide, Ltd., 5, Ludgate-circus Buildings, London, E.C.

REMUS. 347,120. A pedestal water-closet pan made of earthenware. Class 16. Broad & Co., Ltd., 4, Southwharf, Paddington, W.

Qualitype 346,299. Bead trimmings (glass). Class 15. Lyons, Sons & Co., 3, Argyll-st., W.

ALTIC. 346,197. Earthenware or fireclay lavatory basins and closet basins. Class 16. Robert Brown & Son, Ltd., Ferguslie Works, Ferguslie, Paisley, Renfrewshire.



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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

Mr. A. G. Harley Jones, china and earthenware manufacturer, Fenton, Stoke-on-Trent, is represented in London by Mr. F. Findlay, who shows samples of his productions at Gamage-buildings, Holborn-circus, E.C. Mr. Harley Jones specialises in artistic fancy goods, Royal Vienna art pottery, Samian, and other high-class wares. He manufactures many acceptable lines in useful pottery for domestic purposes, but he has recently made great advances in the artistic and ornamental branches of pottery, and it is more particularly of these that I propose to speak at present. The examples are well arranged in Mr. Findlay's fine showrooms, and are fully representative of the manufacturers' principally enamels of a bright character, adapted to the subjects illustrated. The chief themes made use of were peony, prunus, pagodas, and the four seasons. The samples we have just seen reproduce these decorations with great fidelity. We give illustrations of three pieces—a tall vase, a round jar, and a tall covered vase, reproductions of a photograph taken by our photographer of samples from Mr. Findlay's rooms. The black and white reproduction shows the form only, whereas the charm of the originals is in the exquisite colouring, and especially in the effective groundwork of blue. There are also fine gold lines, and in many cases the introduction of gold scroll work enhances the appearance of the ware. In addition to pieces of the types illustrated, teapots, rose bowls, candlesticks, ash trays, trinket boxes, match holders, pot pourri and other articles are produced in Harley ware.

Mr. C. J. Pratt (National Glass Co.) has removed his London sample rooms and offices from Gamage-buildings



[*Photo. by "The Pottery Gazette."*

"HARLEY WARE": A. G. HARLEY JONES, FENTON.

latest and best productions. Amongst many other pleasing decorations there is a nice variety of "Harley's Japans," "Scale Blue," exotic birds, and old Lowestoft patterns. These are all dainty ornamentations, skilfully executed on well-modelled forms. Mr. Harley Jones is an enterprising potter, and it is in no half-hearted way that he is developing the production of high-class goods. "Harley Ware," the distinctive name he has adopted for them, is becoming popular, and his trade mark—the monogram H. J. in an erratic border of lines in the Japanese style—is very characteristic of the ware. He is making a great feature of reproductions of the famous Kang-Hsi powdered blue, and he has been very successful in perfecting them. There is opportunity for the display of great ability in this form of decoration, although it is a reproduction, and Mr. Harley Jones has evidently at his service artists who possess that ability. The powdered blue of the Kang-Hsi period was blown on to the ware through gauze, and was used as a groundwork for the designs, applied in various ways)—to No. 1, Charterhouse-street, at the corner of Ely-place. His new show-room on the ground floor is conveniently arranged for displaying his large collection of samples, and is both lofty and light. The situation is most convenient for dealers, since Holborn-circus is the recognised centre of the wholesale pottery and glass trade. Mr. Pratt has an extensive basement under his show-rooms, and he retains the store and packing rooms he has hitherto occupied in Ely-place.

Mr. John Sadler, Central Pottery, Market-place, Burslem, manufacturer of decorated Samian, jet, and Rockingham teapots, has appointed Mr. Wm. Asprey as his London representative. He has his show-room at 5, Hatton-garden, E.C., a few doors from Holborn-circus, where a full line of his samples can be seen. Mr. Asprey has had many years' experience in the teapot trade, and is therefore well qualified to advise dealers taking up this branch of the pottery trade. Mr. Sadler makes a pleasing variety of shapes and decorations, and specialises in oval jet

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teapots and hot-water jugs. Amongst the novelties is the "Claris" shape—a good size pot with Samian green ground with white band and flowers in natural colours. We give an illustration of this shape, and also of the "new oval" shape. This has pretty floral decorations —a blue ground and gold stippling. The third pot in our group is the "Dewsbury" shape with flowers in embossed panels, decorated in gold. The pots selected for illustration are all large sizes. This is a feature of Mr. Sadler's pots—they are adapted for family use. There



MR. JOHN SADLER. [*Photo. by "The Pottery Gazette."*

are too many shapes to mention them all by name, but the "Antique" shape is deserving of special notice. It is supplied in green Samian and jet. Coffee pots and jugs are supplied to match all the shapes and decorations in teapots. Sets consisting of teapot and stand, coffee-pot and hot-water jug, make very acceptable and inexpensive presents for the New Year. All shapes are supplied in either jet, Rockingham, or Samian, and many prettily decorated and gilt patterns are suitable for a high-class trade. These are in good taste, and though bright and attractive, are free from vulgarity.

Parliamentary Notes.

The Merchandise Marks Bill was presented in the House of Commons by Mr. Peto on Dec. 19. The object of the measure is to ensure that imported articles of foreign manufacture shall be marked "Not British," thus avoiding advertisement of the country of origin. The Bill has been amended to meet the views of the Birmingham and Glasgow Chambers of Commerce by the adoption of the description "British Empire Made" for articles of British or Colonial manufacture.

The Bankruptcy Bill.—In the House of Commons on Dec. 9, Mr. Asquith stated that it would not be possible to proceed further with the Bankruptcy Bill this session. On Dec. 12 Mr. Amery asked the President of the Board of Trade if he would state how many chambers of commerce and trade associations had already appealed to him to make sure of the passage into law this session of the Bankruptcy Bill; and if he could state what prospect there was of the above Bill being passed into law this session. Mr. Robertson, who replied, said: Twenty-one such representations have at present been received. With regard to the latter part of the honourable member's question, I can only refer him to the answer, of which I am sending him a copy, given on Dec. 9 by the Prime Minister to the honourable member for the Brentford division. If the Bill should fail to pass this session it is proposed to re-introduce it at the earliest possible moment next session.

Special Rules for Potteries.—In the House of Commons on Dec. 12, Mr. Hills asked whether the conference upon the new rules for lead processes in the Potteries, due to be held on Nov. 25, had been held: and, if so, with what result? Mr. Ellis Griffith, in reply, said the inquiry under section 81 of the Factory Act with regard to the draft regulations was held on Nov. 25 and two following days, and the Home Office expects to receive the report of His Honour Judge Rucgg, who was appointed to hold it, very shortly. Mr. Hills then asked the Home Secretary if his attention had been called to an inquest held in Stoke Workhouse on Dec. 2 upon John Piper, a glost placer of Longton; whether he was aware that the coroner stated that in Piper's case the rules with reference to medical examination of workers in lead processes had been absolutely ignored; that the deceased had been working in lead processes for five years, during which period it was possible that he had never been medically examined at all; and what steps he intended to take. Mr. Ellis Griffith: Yes, sir; my right hon. friend has received a report on this case and the proceedings at the inquest. The man was a casual worker, and exact particulars as to his previous employment are not ascertainable. It appears, however, that there was serious neglect in the observance of the provisions in the special rules with regard to the examination of casual workers, and the firm by whom the man was last employed has been severely cautioned. As the man has not been employed in a lead process since 1911, it is not now possible to take proceedings. The new rules, which will be in operation shortly, contain further provision in regard to the examination of casual workers. Mr. John Ward: What steps do the Department propose to take to see that the proper observance of these rules is carried out. Otherwise what is the use of any rules at all? Mr. Ellis Griffith: The new rules will shortly be in operation, and the inspectors, of course, will do their best to give them effect. Mr. Hills: Who is to blame for this scandalous breach of the rules? Mr. Lynch: Is the hon. gentleman aware that lead poisoning is one of those diseases which may be entirely eliminated, and will he see that the new rules are carried to such a point as to make lead poisoning impossible? Mr. Ellis Griffith: That is a very controversial matter, of course.

The Belgian Glass Trade has, according to a Continental correspondent, improved considerably. The manufacturers have had for many years to fight against the workmen's unions and mutual severe competition, but now they have formed an association for the control of sales and prices. Very satisfactory results have already been secured during the short existence of this union; it has been possible to increase prices all along the line whilst the relations between employers and employes are much more satisfactory. The principal markets with which Belgium does a trade in glass are England, Japan, Canada, Holland, Argentine, America, Australia, China, Turkey, India, Germany and Switzerland.

THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

By One of Our Staff.

(*Continued from page* 1305, *last Volume.*)

VIII.—JONES & HIGGINS, LTD., PECKHAM.

JONES & HIGGINS, LTD., Rye-lane, Peckham, London, S.E., are drapers and general house furnishers. The term "house furnishers" is a much more comprehensive one than it was formerly, and, like other great departmental stores, the company supply all that is newest and best produced by the arts and industries that contribute to the equipment of the home, whether it is in a mansion, villa, or cottage. There never was a time in the history of retail distribution of goods when so many and such great advantages were offered to the public, and the remarkable evolution of departmental stores has been the cause of most of them. For many years I was strongly opposed to what is known as "over-lapping" in trade—that is, the supplying of the goods of one industry by dealers whose business is selling the goods of another industry. To conduct a retail business with full advantage to his customers a shopkeeper should thoroughly understand the details of his trade. An individual tradesman cannot possibly know all that should be known by any one who undertakes to deal in drapery, pottery, furniture, and ironmongery. My objections were to a practical draper, or an experienced ironmonger, displaying china and glass with his regular goods, and the reason for my objection was that for many years distributors of other goods introduced a little pottery and glass which they sold at very cutting prices in order to attract customers. Many houses (I do not say all) obtained their first reputation for being "cheap" by selling certain lines in china and glassware at almost cost price. This does not apply to the great departmental stores as they exist to-day. As I have said before, they are the results of the enterprise and energy of experienced business men with a large capital at their command. A few retailers with too limited a capital have not been able to maintain their position in competition with the "stores," but that very competition has caused other dealers to put more energy, more life into their business with the best results. There are many advantages to a customer in dealing at a glass and china shop, the proprietor of which understands all about the goods he sells, and ladies especially appreciate them. The great stores of which I am giving notices are in a very different position to a tradesman who mixes his goods incongruously. For instance, Jones & Higgins, at Peckham, cannot be said to to have "a shop," but rather an aggregation of shops. Their glass and china department is a



[*Photo. by "The Pottery Gazette."*

Part of China Department: Jones & Higgins, Ltd.

very extensive one, though I believe it is one of the youngest of their many branches. The business has not yet been established half a century, and yet it is one of the largest distributing "stores" in London, and has upwards of a thousand employees, the outcome of a small draper's shop. Peckham, now one of the busiest shopping districts in the metropolis, was once an aristocratic residential locality. The names of some of the streets suggest that it was in some way associated with the legal profession. Roads are named after Mr. Justice Talford, and Lords Denman, Selborne and Lyndhurst. In Marlborough-road, near the High-street, there was Marlborough House, where the Churchill family once lived, and Oliver Goldsmith wrote nearly the whole of the "Vicar of Wakefield" at Peckham. In place of this once rural retreat there is now an enormous amount of retail business, and Jones & Higgins contribute largely to it. The glass and china department, under the management of Mr. Lloyd, occupies a long room with a lofty roof and dome lights, and the goods are admirably arranged, with elegant fittings on each side and enclosed glass stands down the centre with wide avenues on each side of them. They show everything in china, earthenware, and glass for domestic, useful, and ornamental purposes; the useful, however, preponderate. In toilet ware, dinner and dessert services, tea and breakfast ware, there are many of the very newest designs, some richly decorated and others in neat, inexpensive patterns. Specialities in fruit bowls, trifle trays, coffee sets are included in the miscellaneous tableware. Pressed glass dishes in many shapes and decorations, cut jugs, tumblers, wines, decanters, and salad bowls in dainty glass patterns are shown in great variety. Many very pretty suites of table ware are decorated in patterns reserved to the company. They are attractively shown as in use and are offered in sets, or any of the pieces can be supplied separately. The company do a large mail order business with all parts of the kingdom, with customers who formerly lived in the neighbourhood, and who continue to deal with them. They maintain their connection by the periodical distribution of illustrated sheets, and by sending certain goods carriage paid. Their catalogues refer principally to drapery and furniture, but they issue sheets of illustrations of our goods. In the china and glass departments many articles are prominently labelled as "useful presents." We give an illustration of a portion of the department, and one of a very pretty corner window. These are reproductions of photographs taken for the purpose by our own photographer. The window is admirably arranged with high-class wares. The public are invited to walk through the various departments, and are encouraged to inspect the stock without being importuned to purchase. This is a judicious arrangement from every point of view: people are often induced to make purchases by the sight of things they are not in immediate want of.

IX.—DERRY & TOMS, KENSINGTON HIGH-STREET.

Kensington is famous for its stores, and Derry & Toms have a very attractive and extensive establishment, with artistically arrayed windows facing a beautiful arcade approach to the District Railway Station. With the instinct for display, which seems to be innate in drapers, they present an elaborate exposition for the delectation of the public generally, and of ladies particularly. They have one advantage over many of their competitors, in that ladies can travel from practically all parts of the metropolis by railway and arrive in their arcade without any inconvenience from the weather. They have recently made extensive and picturesque alterations in their showrooms. Derry & Toms are distributors of almost everything, but the tastefully arranged windows I have especially mentioned are filled with beautiful drapery, millinery, and lingerie—just the things to please that large and increasing number of ladies who find so much pleasure in "looking at the shops." There is always plenty to look at in the windows of this up-to-date firm, and as the window displays



[*Photo. by "The Pottery Gazette."*

JONES & HIGGINS, LTD., PECKHAM.

are frequently changed the public interest in them is sustained. At the time of my visit, at the beginning of December, the firm were preparing for their special Christmas show in all departments. All were exceedingly interesting, but while I could not help admiring them. it is not in my province to speak of them in detail. I was, however, quite at home in the

Glass and China Department.

This is a very large and admirably appointed room, almost square, and the view from any part is unbroken by pillars. We give an illustration of a part of this room, reproduced from a photograph taken by our own photographer. The whole room is dependent on artificial illumination, and as our photograph was of necessity taken by a "flashlight," only the portion of the department nearest the camera was caught. The result is but an imperfect representation of a very fine display, which we regret, but could not avoid. The arrangement of the goods is more on the lines of some of the large sample rooms in New York than any I have seen in this country. I understand that when the firm added a glass and china department to their other branches of trade they commenced with fancy lines only, and that it was about eight or nine years ago they introduced pottery and glass for domestic purposes, with the most satisfactory results, and now they stock everything useful and ornamental required in a house, and they do this in a very liberal manner, presenting a large assortment in all lines. Useful pottery, both china and earthenware, is conspicuous in the front of our illustration, while figures, candelabra, and fancy goods are on stands in the centre. Dinner ware, tea ware, toilet ware, dessert ware, and glass in suites and loose are arranged at the sides of the room. They show a good assortment of plain art pottery in self-colours. Flower vases and fern pots of various sizes, jardinières, candlesticks tall and flat, and a collection of miscellaneous pieces in rose du Barri. They show a very handsome morning set—teapot, sugar and cream, and tea cups and saucers with plates, an exact reproduction of old rose du Barri. The principal feature about the firm's stock is the large number of specialities. There are a variety of shapes and decorations, produced expressly for this firm and confined to them. They stock most of the best of the standard shapes and decorations, but specialise to a large extent in all lines. This applies to glassware as well as to pottery. The Christmas trade is made much of by stores, and the firm submit a number of things in our trades that are especially suitable for presents. There are tables full of



[*Photo. by "The Pottery Gazette."*

Section of China Department: Derry & Toms, Kensington.

dainty little knick-knacks in attractive boxes that ladies can carry away with them as souvenirs for their friends. Amongst their special lines are tea and breakfast services in the dainty Queen Anne shape, with rosebuds and green leaves on a pure white ground; this is made solely for Derry & Toms, and although a speciality, it is offered at reasonable price. Single pieces for replacing breakages can be had at any time. A further recommendation in the eyes of some customers is that this ware is glazed without lead. The firm do not issue a catalogue, but they advertise extensively in the daily papers, and they keep in touch with their customers by circulars of novelties and specialities sent direct to them; they have customers from all parts of the kingdom, and many in foreign countries. Their trade is principally in high-class and medium qualities, but they also stock useful kitchen ware.

A SHORT VISIT TO SOME NORTH DEVONSHIRE POTTERIES.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

WHEN making a tour of some of the principal towns in Devonshire for the purpose of visiting the pottery and glass shops, I took the opportunity of calling at some of the potteries making what is known in the trade as "Devonshire Ware." Our readers are all familiar with this pleasing and very popular art pottery. My recent journey (taken in the first week in December) was limited to North Somerset and North Devon, and, as far as potteries are concerned, I was only able to call on some of those in the immediate neighbourhood of Barnstaple. I mention this because there are important potteries in other parts of Devonshire which I hope to visit shortly.

Pottery of some kind has been made in almost every part of the kingdom from the very earliest times, and where the local clay has been found suitable the manufacture has become permanent. The prolific output of high-grade clay in Devon and Cornwall led to the transport of the raw material to districts in which fuel (mostly coal) was abundant, as being a more economical arrangement than carrying the fuel for firing the clay to the vicinity of the clay deposits. This accounts for the principal centre of pottery manufacture being in Staffordshire—so far away from the clay pits. But there are many grades of clay, and some of them make useful articles, but not of the intrinsic value of other products. Brown earthenware pottery has been made from local clays in the neighbourhood of Barnstaple for many years, but was limited to pots and pans, drain pipes, and roofing tiles until the development of schools of art led to the application of these "common clays," as they were called, to the production of art forms. Several manufacturers, including the late Sir Henry Doulton and the late Mr. John Phillips, essayed the production of works of art from these common clays, and their efforts having been commended by Sir A. H. Church before the Society of Arts (now the Royal Society of Arts), the possibilities of an improved industry were appreciated by many students at schools of art and numerous experiments were made.



NEW FRONT OF BRANNAM'S ART POTTERY, BARNSTAPLE.

ROYAL BARUM WARE.

Amongst them Mr. C. H. Brannam, who succeeded to the Litchdon pottery at Barnstaple, proceeded to put in practice the art training he had received, by covering the ordinary brown clay with white slip, and by scratching produced a simple sgraffito. His first efforts were small vases neatly incised, and he found a ready sale for these, although they were comparatively rough. The manufacture rapidly increased under artistic supervision, and "Barum Ware," as he called his productions, has continued to improve, until it is now truly artistic in conception and execution. It is still the common earthen-

ware body, but it is treated artistically, decorated by designs in coloured slip, and glazed with lead. The latest developments are in beautiful colour combinations. The ability to decorate pottery artistically is not confined to high-class porcelain works, and it is to the credit of schools of art that their students have been able, with inferior local materials, to produce decorated pottery of great artistic merit. Mr. Brannam has developed a great industry, which has increased so much that it was found necessary to enlarge the works, and the greater part of them has been rebuilt. We give an illustration of part of the artistic front, a reproduction of a photograph taken expressly for us. It is to be regretted that such a handsome façade should face a comparatively narrow street. We also give an illustration of part of one of the show rooms. It will be seen that "Barum Ware" (which has



PART OF SHOW ROOM: ROYAL BARUM ART POTTERY.

been honoured by Royal Warrant) is most varied in character and design. Our illustration shows the multiplicity of form, but the colours and glazes are richer than ever, and in perfect harmony. "Royal Barum Ware" is a registered trade name, and every piece bears the name "C. H. Brannam" in addition to the registration number 44,561.

THE FREMINGTON ART POTTERY.

As I happened to be in Barnstaple I took advantage of the opportunity to visit the Art Pottery at Fremington, controlled by Mr. E. B. Fishley, an artist potter of whom I had heard much, but whom I had never seen. I knew his work by repute, and was also acquainted with some features in his remarkable career. I had for some time entertained the desire to include Mr. Fishley in our series of articles on "Typical Potters," and it was principally with this object in view that I decided to interview him. I knew that he was so modest and unassuming that a request for an interview would probably result in a polite refusal, and I concluded that a personal and an unexpected visit would be most likely to give me what I wanted—a few minutes' conversation with a natural artist whose ancestors for several generations had been potters, and who had himself been a practical potter all his life. I took a train to Fremington (and there are not many in the course of a day), and then inquired my way to Fishley's pottery. It was a very long walk, and if any of my readers think of visiting the place, I advise them to arrange for a conveyance of some kind to take them there. However, it was a pleasant walk—nearly the whole distance by the side of an estuary of the River Tawe, with an abundance of pretty woodland scenery, but very few houses and these widely separated. No one passed me, and I only met one person, of whom I asked, "How far it was to Fishley's pottery?" I may say that his estimate of "half a mile" was very different from my own, and both of us differed from the truth—but in opposite directions. However, I arrived at the pottery in the course of time. I have seen some dilapidated potteries in Staffordshire (before inspection was introduced), but never one quite so antiquated as this one at Fremington. I asked the first person I saw if I could see Mr. Fishley. He went away, and soon a workman came to me, and before I could announce myself, he asked "What brings you here?" I was proceeding to say, "I am from THE POTTERY GAZETTE" when he laughingly said, "Oh, yes, I know where you are from, but what brings you here?" I was sur-

prised and said, "To whom am I speaking?" He replied, "My name is Sadler, of John Sadler & Son, Burslem." I naturally said, "The question seems to be, what brings you here?" He then explained the matter in a few words. Mr. Fishley died in the early part of the year. The pottery was advertised for sale in THE POTTERY GAZETTE, he visited the place, and after some negotiation he bought it. I remarked that I did not recognise him, with his grimy hands and face and rough clothing. He said, "I never appeared like this at Burslem." It is a small pottery, and I found that Mr. Sadler himself took a very active working part in it. He reminded me of Cyrus Blenkarn in "The Middleman," for while I was speaking to him he asked me to excuse him while he did something to the kiln fire. He has only been in possession a few months and he says it will take considerable time to get it in order. Potting at Fremington is very different from potting at Burslem. Mr. Sadler has had what the late Mr. Fishley never had—an artistic training, and though he lays no claim to the deftness of execution for which Mr. Fishley was famous, Mr. Sadler is a skilful designer and modeller, and as he has the services of some of the late Mr. Fishley's employees, he purposes carrying on the pottery as far as possible on the lines of his predecessor. It required no little courage to take over such a quaint old pottery, situate in a remote country village, surrounded by fruit trees and fertile land, and some miles distant from a manufactory of any kind. Mr. Sadler deserves success, and I saw enough to convince me that he is not afraid of working to attain it.

The specialities of the Fremington Art Pottery are sgraffito ware, motto ware, fancy jugs and rustic ware, artistic green, matt, lustre, and other highly glazed art pottery, buttons, hat pins, &c. In addition to purely art forms, Mr. Sadler is continuing the production of salters, bread pans, sea-kale and flower pots and general earthenware. His best productions were in the kiln when I called, but we are able to give an illustration of some miscellaneous pieces. They have a pleasing effect, the colours showing through a golden brown glaze. This treatment is suitable for pottery to be used with dark oak furniture. The majority of the pieces illustrated are in the quaint old Devonshire shapes, and are suitable for high-class shops, and also for seaside bazaars. Mr. Sadler makes rose bowls, fruit dishes, and comports in many self-coloured glazes, puzzle jugs, candlesticks, and many other things. The scenes on the pieces illustrated are golf sketches, a monk fishing, Harry Lauder, Dutch scenes, and others. I understand he will shortly have ready scenes from the works of Charles Dickens in the same style. He also makes pipkins, egg-poachers, casseroles, and other articles in fire-proof ware. Many of the best pieces pass through his own hands, and the principal productions have all some portion of his own labour expended on them.

(*To be continued.*)



FREMINGTON ART POTTERY: MR. J. SADLER.

The China Clay Export of Austria-Hungary during the first three quarters of 1912 amounted to 134,288·8 metric tons, showing a marked advance.

THE MANUFACTURE OF CRUDE GLASS.

(SPECIALLY TRANSLATED.)

THE possibility has recently been discussed of manufacturing crude glass in special works, after the manner in which pig iron, for instance, is made, and supplying this crude product to other establishments to be worked up into finished articles. For the present, at least, the existing system of making the finished article from the raw materials in one operation seems to be the more economical; but it is by no means certain that, in course of time, the system of supplying glassmakers with crude glass will not become general. At all events, such an industry, if to be at all profitable, must be conducted on a very large scale, in combination with a chemical works for supplying the soda and in a situation where all the raw materials—coal, sand, and lime—are obtainable easily and cheaply. Arrangements should be made to produce, not only ordinary window-glass, but also a better product for window, mirror, medical, and semi-white glass, and the manufacture of different grades of water glass.

Among the advantages of such a system may be mentioned the possibility of melting the glass metal in very large furnaces, and, therefore, at much less cost than in small, pot furnaces, more particularly because such large furnaces could be run at the most favourable temperature of melting and thus turn out larger quantities of product, there being no need to cool them down to the temperature at which the glass has to be worked. In buying such crude glass, the actual glassmaker would save a good deal on freight as compared with that on raw materials, since calc spar, for instance, loses about 44 per cent. in weight, by the liberation of carbon dioxide in the melting process, and Glauber salt as much as 56 per cent. in the shape of sulphuric acid. Moreover, crude glass could be transported in bulk, in open wagons, instead of in bags and covered trucks.

In a crude-glass works, associated with a chemical works, the sulphuric acid in the raw materials might be

recovered by a preliminary roasting in a suitable furnace. In view of this contingency, the use of acid sulphates would be advisable, on account of the much higher yield of acid obtainable, and the lower price of these raw materials. Calcium sulphate, that comparatively worthless product in chemical works, might also be used in the recovery of the sulphuric acid, since, by substituting this sulphate for calcium carbonate or calc spar, and working with 100 parts of silica, 65 parts of sodium bisulphate and 45 parts of calcium sulphate, about 45 parts of sulphuric acid could be recovered to every 100 parts of crude glass made.

It is true that attempts have occasionally been made, without any satisfactory result, to make use of calcium sulphate and sodium bisulphate; but, in view of the complex character of the chemical reactions occurring in the process of melting glass metal, isolated experiments cannot be taken as conclusive. On the other hand, the conditions under which crude glass could be manufactured on the large scale are far more favourable for working with sulphates than is the ordinary method, in which the glass is melted and worked up at once, because the roasting process to which the charge of glass metal would be subjected in the vicinity of the melting tanks would eliminate a large proportion of the sulphuric acid.

So far as the working-up of crude glass in glassworks, it would be advantageous to have this raw material in as bulky a form as possible, viz., large lumps, and on this account it would be advisable to tap the glass furnace from time to time, instead of ladling the molten glass. Such large lumps of crude glass can be remelted in a comparatively short time, without forming bubbles, provided, of course, that it has been properly made in the first instance. The operation is quite different from melting down cullet, which latter is contaminated with dust and dirt, and always forms large cavities which retard clarification.

It is quite erroneous, says "Sprechsaal," to assume that glass remelted from the crude block is more difficult to work with the blowpipe and is more brittle both during treatment and in the finished article. Given proper composition and manufacture, remelted crude glass can be worked just as easily as that drawn direct from the melting pots; and such glass will be brittle or defective only if it has been made of various parcels of cullet of unknown origin and composition. In point of quality, too, the employment of crude glass will be beneficial to the glass maker, since all that the latter has to do when remelting the crude material is to look out for the presence of solid impurities, which are a great source of annoyance in glass made in the ordinary way. During the remelting process, moreover, there is less risk of corrosion of the furnace lining, another circumstance which has a favourable influence on the purity of the product and also on the cost of production.

Another erroneous assumption is that crude glass cannot be remelted properly without an addition of glass metal, for, if it has been well made in the first place, it will furnish a pure glass on remelting; and, in fact, the addition of glass metal is quite a wrong practice as it retards the melting of the chief material.

In comparing the relative economy of remelting crude glass and of making glass direct, it should be remembered that in the former case the expense of preparing and mixing the charge of glass metal is saved, and there is no damage to vegetation, &c., in the vicinity from fumes. Consideration of all the factors in the case leads to the conclusion that the manufacture of crude glass in the manner outlined above is a practicable proposition, in view of the possibility of recovering sulphuric acid as a by-product, the saving in freight, improved quality, &c.

Empire Notes.

New Canadian Porcelain Works.—A company has been incorporated in Ontario with a capital of $300,000 (about £61,700) for the manufacture of vitrified white porcelain for electrical and other purposes. The first unit of the plant is to cost $150,000 (about £30,800). The name of the company may be obtained by British manufacturers desirous of supplying plant, &c., on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., mentioning THE POTTERY GAZETTE.

New Zealand Trade Inquiry.—H.M. Trade Commissioner for New Zealand reports that the representation of British makers of crockery and glassware is desired by a firm in Christchurch, N.Z. The name and address of the firm may be obtained by British manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C. Any further communications regarding the inquiries should be addressed to H.M. Trade Commissioner, P.O. Box 369, Wellington, New Zealand, mentioning THE POTTERY GAZETTE.

China Clay in Canada.—It has long been considered that no clay of similar character to that produced by the decomposition of granite or felspar is equal to that of the deposits in Cornwall and Devon, says the "Western Morning News." It is clear, however, that in the future, so far as Canada and the United States are concerned, the producers of china clay in Devon and Cornwall will have to consider the effect of a discovery of kaolin or petunze in Canada, said to be equal to the best clay, such as is obtained in the neighbourhood of St. Stephen's and St. Austell, in Cornwall, and Plympton in Devon. The Canadian deposit is about a hundred miles from Montreal, to the north at St. Remi d'Amherst, the works being about two miles from the station of that name and seven from the Huberdean station, which is the present terminus of the Canadian Northern Quebec Railway in that direction. It is considered that the industry is full of promise for the district, and the Canadian China Clay Co. expect to do a rapidly increasing business. This is the first deposit of kaolin to be discovered and worked in Canada, and its comparative nearness to a port and such a navigable river as the St. Lawrence is, will make it a serious competitor of the imported article in Canada, and in the North-Eastern States of the American Union, and especially New York State. The deposit has been known for fourteen or fifteen years, but its nature has only been discovered comparatively recently. The development of the works at St. Remi would appear to be on a somewhat primitive plan. The greater portion of the St. Remi clay is dried in the open air in stacks (or piles), as used to be the method at home. But kilns are being erected, and the production will be more rapid in the future. The working of the stopes at St. Remi is apparently after the accepted way at home, and the fluid clay runs in launders for about two hundred yards to the pits. The clay at St. Remi has been found to be particularly suitable for the coating (or sizing) of white paper, and as the works are farly near a number of Canadian paper mills, a considerable trade will be done. What is good for them is also good for the country across the frontier. It is found to be quite equal to the imported article for bleaching and sizing cotton goods, for which purpose there is a big demand. It is to be used also in the rubber industry, and for trade, electrical, and domestic pottery where the texture and hardness is desirable.

CAUSES OF BREAKAGE IN GLASS MANUFACTURE.*

(*Concluded from page* 1310.)

WHILE the method above referred to gives us specific and definite information as to the lack of chemical homogeneity of the glass, nevertheless same is subject to more or less inaccuracies, and there arise many conditions in composition which are more or less confusing, particularly as to just what element the cord or disrupting cause is due to. Therefore, I have sought for other methods and means, which do not require skill and time to determine these chemical changes and variables, that may be applied with definiteness and at the same time enable one to apply the results in operating the furnace and in controlling the batch mixture, and I believe that the determination of the refractive indices of the glasses offers a solution of the problem.

As has recently been stated by Tillotson, it is quite possible to, within certain limits, affix a specific refractive index for each of the ingredients used in the making of commercial glass, and such being the case it seems that it would be quite possible, by a system or a series of analyses and refractive indices determination of the various combinations of silicate of lime and soda, to acquire information of sufficient accuracy as to denote the exact cause of this heterogeneity, and while it is, of course, true that fire conditions may bring about sufficient disturbing influences upon the melting glass as to be the cause of breakage, yet I believe that this reveals itself in disturbing the refractive index to a much less degree, if at all, and that one will be enabled to differentiate this condition from improper chemical combinations.

It was this part of my investigations that I was unable to complete. However, I have made a number of determinations of the refractive indices of glasses as they came from the furnace, and have compared such determinations with the analyses, etchings and microscopic examinations as above referred to, and find that they are much more accurate and definite in their definition as to the cause of breakage, although perhaps not quite so specific as to the elementary cause; that is to say, one can very easily determine whether the breakage is due to chemical heterogeneity, physical heterogeneity, or to excessive strain produced by too rapid cooling, as is shown by the following instances :—

The method used was as follows—samples were taken from the cylinders, or articles, as they came from the machines or workmen, crushed by tapping in an agate mortar so that the major portion would pass a 60 sieve. The refractive index of the specimens was determined by the Becke line method, using a Bausch & Lomb petrographic microscope, applying the 1 in. ocular and 8 mm. and 4 mm. objectives. A series of oils of different compositions were compounded, the refractive index of same being varied by 2 points in the third decimal place, I using for the major portion oil of juniper (n = 1·4761), oil of sassafras (n = 1·5233), and oil of cinnamon (n = 1·5773), and making mixtures of these compound oils as requirements demanded to get the proper index to the fourth or fifth decimal place. The instrument used was a Fuess, Model II., refractometer. It was found that one could easily determine the indices to the fourth or fifth decimal, although no attempt was made, with the exception of peculiar cases, to reach this degree of accuracy. To illustrate the possibilities of this method, one or two instances will suffice.

* Paper contributed by R. L. Frink, of Columbus, Ohio, to the Eighth International Congress of Applied Chemistry, held in New York, September, 1912.

A sample of glass which was taken at the time when breakage was very heavy, and in which several heavy cords were seen in each cylinder, showed a refractive index of the clear glass (specimen C-251) of 1·5253, while the cord (specimen C-252) indicated 1·5088.

In another instance, where the tank had been running very badly, the gas being low and the fire being very poor, much difficulty had been experienced in melting sufficient batch to keep the glass at the proper level, and much trouble experienced from cords being produced by reason of the cold air blowing into the gathering holes, and which produced what is known as the "cold cord." In this sample it was found that the thickness of the clear glass was ·145 in., while the chemical cord was ·157 in. thick, and the cold cord about ·15 in. thick. The natural glass (specimen C-253) had a refractive index of 1·522. The chemical cord (specimen C-254), in which there were seen small nodes, or thickened portions of about ·1 in. or 2·5 mm. in diameter, had an index of 1·519. Specimens of the physical cord (C-255), which were trimmed as free from the surrounding glass as possible, gave an index of 1·521, and there also appeared several crystals, more or less anisotropic, having an index of 1·517.

Many times in the crushing of glass it is noted that there appear to be portions that are more friable, or brittle, than are others, and in one sample where this appeared to be quite marked, it was found that the main portion of the part investigated, same being a chemical cord (specimen C-257), gave an index of 1·518, while that for the hard, or unfriable portion was 1·522, and which corresponds with the index of the clear glass surrounding the cord. In making determinations of several other specimens of chemical cord C-257, concordant results were obtained with those denoted, the indices remaining at 1·518 and 1·519.

In specimen C-258, being glass from the same tank, the batch composition being identical, and the conditions throughout being as near the same as could be expected, in commercial operation, as when C-251 was taken, but being from a several months' later production, I obtained an index for the clear glass of 1·52, while the cord in this case (specimen C-259) gave an index of 1·5237, this, as will be noted, being directly opposite to the conditions as found in C-253, C-254, and C-255.

Several months after the above mentioned specimens were taken, the glass from this furnace showed an index of 1·524, and which was no doubt due to a reduction in soda, the salt cake in the batch analysis showing that the soda content was nearly 1 per cent. lower, and the silica content nearly ·6 per cent. higher than heretofore.

In the making of lenses there is often considerable difficulty experienced in producing the blanks free from reams or striæ, and it has been quite a problem, and a matter of much conjecture among the manufacturers as to what is the due cause—whether it be from erosion of the pots, or due to the chilling of the glass during the process of melting—and it would seem that the results found in my experiments would answer this question quite decisively, inasmuch as that portion of the lens which was clear gave an index of 1·512, while the portion which showed striæ gave 1·5136.

In the manufacture of bottles, lamp chimneys, globes, table ware, and particularly lantern lenses, automobile reflectors, semaphores, tumblers, or other articles which are required to stand variable temperatures, the question of breakage is a very vital one, and should it be possible to work out a complete and definite method as simple as is the determination of the refractive indices, as above outlined, it would be something which would be accepted and hailed with delight by every progressive manufacturer in the country. He knows, of course, that his ware is

breaking either because of injudicious handling or because of improper making, but rarely, if ever, does he know, and in fact it is quite difficult to convince him that this breakage is due to the mixing, melting, or control of the conditions surrounding the handling of his glass prior to the time that it reaches the solid state, and it would be of inestimable value and benefit if our industrial scientists could place in his hands some simple, non-scientific but practical method and means whereby he could with certainty and definiteness control his operations and obtain uniform results.

The glass industry is undergoing radical and revolutionary improvements, much money and time being spent in experimenting with and developing these improvements, relying upon protection of patents so as to give sufficient monopoly to warrant the vast expenditures necessary to demonstrate the practicability of such inventions and improvements. However, a little investigation of the patents issued in the United States, and the basis for the claims in such patents, will soon reveal the fact that there is substantially no understanding of the laws and principles governing the properties of glass, nor of the chemical actions and reactions controlling its composition, and among some of the more educated capitalists controlling certain branches of the industry, this has come to be a serious consideration in the point of further investment towards getting improvements, for, unfortunately, we Americans are prone to shun investment unless large returns are in sight, and, unlike our foreign relations and associates, we depend upon our research laboratories and competent and loyal help to carry out the more salient and less obvious factors in our manufacturing processes, rather than relying upon published facts and theories, protected by patents, law and jurisdiction.

I have been connected with the glass industry in its various branches from the point of employee, operator and inventor, and in the research laboratory, and have also been more or less in intimate touch with other industries, and in my opinion, without doubt, the glass industry is the most neglected, but has more intricate problems than any other that has come to my attention, and its problems are difficult ones by reason of the fact that but few of them manifest themselves by the production of a direct result, but in the majority of cases are hidden, or conceal themselves, by reason of the very transparency of the material.

I earnestly hope that our scientists, industrial engineers, professors, and students, will take a greater and a deeper interest in the problems confronting the manufacturer, and I shall certainly be very pleased to devote my time and laboratory, and give personal escort to those sufficiently interested, to the plants with which I am connected, for I feel that it is only in the practical operating plant that these problems manifest themselves, and where real and beneficial results can be accomplished which can be made to produce profits and dividends, and without such a final conclusion to the work, very little, if any, progress will be made in getting at the more concrete factors of this industry, for it is doubtful if there is any university, educational institution, or private individual who would feel like spending a sum sufficient to erect and operate furnaces for experimental reserach purposes, of dimensions that would produce the conditions found in practical operating plants.

With the assistance of the manufacturers and capitalists who are operating the plants for a profit, and with the aid of judicious scientific investigation, which they can be shown will produce added profit, it seems that it is possible, by proper investigation and research, to produce glasses, and the apparatus for manipulating the same, as to greatly broaden the field of its use, either by improving its properties in the way of resistance to fracture and heat, or reducing the losses, for it is true that it is the cheapest commercial commodity in the crude state of any of our building materials. Is it not possible that we may step from fancy and fiction into fact and reality, and build our houses of glass, conduct our water supplies through glass, and sanitate and insulate in a manner that would be of great universal benefit ?

FORTY YEARS' RETROSPECT, 1872-1912.

(*Concluded from page* 1322.)

SILBER & FLEMING was another wholesale firm who kept large stocks, both English and foreign, but principally the latter. They were burned out about 1880, I think, and rebuilt a large block of show rooms in Wood-street, but the business gradually declined, dealers finding manufacturers more disposed to supply them direct, and was eventually closed down.

Nestle & Huntsman was another large firm of factors. Shorters were of course in existence, and also Vickeridge in the Borough, and Finney at Clerkenwell Green, where you could pick up Minton's seconds at very low prices.

Wittman & Roth, in Great Marlborough-street, were doing a large business in those days in foreign china and glass, some of their specialities being very successful. They removed some twelve years ago to Farringdon-avenue, but eventually ceased to do business.

About 1879, I think, Worcester introduced their wonderful line of litho decoration on vases, jugs, &c. The designs were very effective, and being placed on the same beautiful shapes previously used for expensive decoration (with a few exceptions) instantly attracted notice, and eventually developed into an enormous business, particularly with America, where some of the jobbers bought and distributed certain special shapes in the way of jugs, &c., by thousands.

The re-making of china by Wedgwoods in 1878 was another interesting development; and with a series of excellent models and designs well pushed by their agent, Mr. J. Buttle, they were very successful. Their showrooms used to be under Stuart's, in St. Andrew's-buildings, but they afterwards moved into Hatton-garden, near the post office, from whence they only recently moved into their present splendid show room under T. Webb in Hatton-garden.

Looking back over this long period and comparing the business of the present day with that of the 'seventies, I do not consider that the china trade has improved, although enormous progress has been made in the earthenware branches. Of course, a larger aggregate trade is done, but the average purchaser does not buy the class of service bought by his father. The sales of china dinner services were much more, considering the difference in population, and on the whole I think more expensive tea and dessert services were bought more freely in those days.

One of the most important developments in the china dinner trade was undoubtedly the introduction of the Anglo-China by Geo. Jones & Sons, about 1884. This discovery, by the late Mr. F. R. Benham, enabled the English makers to compete successfully with Haviland and other French manufacturers, who up till then had the market for cheaper china dinner ware entirely to themselves. It was successful from its first introduction, and it is satisfactory to know that it still commands a large sale.

There has certainly been considerable falling off in the china table decoration trade. The old Cupid and basket

top comports and centres sold well in the 'seventies, succeeded later on by the fine productions of Moore Bros., whose well modelled designs of Cupids with various flowers modelled in relief (such as cactus, hop, blackberry and orchid), either in white china or tinted and gilt, sold successfully till within the last ten or twelve years. Since then nothing in china has really been brought out that has met with anything like a general demand.

One noticeable feature in the business of these early days has practically disappeared for some years, viz., the sale of china flower pots, principally French. Several of the foreign agents, like Mr. F. Cox, of Demartial's, sold very large quantities up to quite expensive ones. The furniture people also mounted them on wood or metal stands, with ornamental chain embellishments.

There was one development of ornamental pottery that met with deserved success about 1882, I think, viz., Doultons' (Burslem) beautifully modelled chrysanthemums in relief on plaques, and the series of painted chrysanthemums on ivory body for vases, jardinières, &c. About this period also there was a large sale of Barbottini ware, the floral decorations in slip ware being suggested rather than pronounced.

The large development in the French fireproof trade has been a very important feature of the last twenty years, principally due to the efforts of the late Mr. Chomette, of C. Pillivuyt & Co., one of the most popular men in our trade. The fireproof china has been supplemented by the demand for the earthenware marmites saucepans, &c., during the last four or five years. This has led to a competitive trade in English redware, similar shapes to the French being supplied by Doultons, Bournes, and others.

Table glass has not changed so very much, many of the old cut patterns still selling as well as they did 50 years ago; but in ornamental glass great changes have taken place. From 1872, for many years, the old-fashioned flower stand table centres were in general demand. Variations of tall centre tubes, with either side vases or arms holding baskets mounted on silvered glass plateaus, were produced in thousands. Many of them were in coloured glass, frequently mixed with results that certainly do not appeal to the taste of to-day. Webbs were making some very graceful forms in flower vases, bowls, &c., but even here colour was a prominent feature, one successful decoration consisting of coloured glass (turquoise, green, or ruby) prunts or handles or feet on flint bodies. Later on, about 1880, the rustic plant stand came into prominence, originally brought out by Mr. Pearce, and consisting of canes of flint or coloured glass wired into octagon shape, in the centre of which was a silvered glass panelled plant holder. These were very successful for some years, till the cheap imitations in foreign glass swamped the market and spoiled the sale.

About 1886 the most remarkable results were obtained from the introduction of the "fairy light" by the late Mr. S. Clark. The public demand for these lights was phenomenal, and nearly every glass manufacturer was occupied in producing supplies of these very effective little lamps. Stuart's "cameo" designs in various tints were probably the most successful, but Webbs' "Burmese" colouring must have had a very large sale also.

Later on one of the principal features in ornamental glass in our trade were the series of floral table decorations brought out successively and successfully by Mr. Walsh Walsh, and their rose, cactus, carnation, lily, and other designs will readily occur to many who read these notes. Their rustic glass was (and even still is) a great success also. It is within the last few years that I think English crystal glass has come into its proper position as a table decoration. The elegant and useful ranges of shapes, with tastefully cut or engraved decoration, show off our British glass to perfection; and the public evidently appreciate it, judging by the busy condition of our few glass factories at the present time.

The Stores business has rapidly increased and developed till, at the present time, it is the most important section of the London trade; and in this connection it is interesting to recall those I have known in connection with the various large businesses included in the term "Stores." Whiteley.—Mr. Owen was managing the department when I first knew the firm, to be later on succeeded by Mr. Barber, who resigned to take up the London agency of the Rochester Tumbler Co., now incorporated with the United States Glass Co., and for whom, until quite recently, Mr. Barber was travelling. He was succeeded by Mr. C. Cousins, who later made room for Mr. Thomas and Mr. Wood (now at Selfridge's). C.S.S.A.—In 1875 Mr. Sherer was manager, followed after many years by Mr. Townsend, Mr. Hoggett, and Mr. Kemp. C.S.C.S.—Mr. Heindrick was manager for many years, and at his death Mr. Richards succeeded, followed by Mr. Grey. Harrod's.—Mr. Pinxton, Mr. Leach, and Mr. Thwaites. A. & N.—Mr. Defries, Mr. Suthers, Mr. Holloway, and Mr. Leach. Shoolbred's.—Mr. Riley for many years, then Mr. Stanley. Maples.—The only establishment where no change has taken place.

Any recollections of the period under notice would not be complete without reference to the principal men in our business who have passed over to the majority:—Mr. McWilliam, one of the most popular and respected members of our business, was agent for the Belleek Co., and afterwards for Malings & Wardles, in Bartlett's-buildings, for quite 40 years. Mr. H. Giller, of Geo. Jones & Sons, was his next-door neighbour for nearly as long. Mr. F. Stuart, of Stuart & Sons. Mr. J. C. Chomette, for so many years Pillivuyt's representative. Mr. A. Jenkinson, Mr. C. Danby, Mr. E. J. D. Bodley, Mr. J. Buttle, Mr. Rowe (Haviland's), and only quite recently Mr. F. R. Benham, Mr. L. J. Murray, and Mr. C. Nestle.

In connection with my business I have had the opportunity of visiting the principal Continental factories, and, although there is no doubt that in certain specialities, such as figure modelling, &c., the Dresden and Berlin factories and the numerous Thuringian china works are unapproachable, yet for the large bulk of the useful trade both in china, earthenware, and glass, and particularly in the fine ornamental ware of Worcester, Derby, Coalport. &c., the English manufacturer is easily first for good ware, good designs, at fairly reasonable prices.

Forty years of handling china and glass does not diminish one's interest in the productions of our trade, which seem to appeal to one more than ever. The enormous variety of shapes, designs and decorations which come under the buyer's notice year by year show only too clearly how well our manufacturers are keeping up the best traditions of the trade; and I see no reason why we should not hold for many years to come the proud position we do in the china and glass industry of the world.

In these notes, written entirely from memory, there are possibly errors of omission and commission, so that any corrections will be willingly accepted.

The Pottery Export of Austria-Hungary during the first nine months of 1912 amounted to 63,068·8 metric tons, of which 12,979·8 m. tons was classed as porcelain. In each case a substantial increase is recorded.

Hollow Glassware to the weight of 52,007·7 metric tons was exported from Austria-Hungary during the nine months ending Sept. 30, 1912. The figures show a marked decrease.



A FEW CHINA SHOPS IN SOMERSET AND NORTH DEVON.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

IT is many years since we noticed the glass and china shops in this portion of the West of England, though we have been in close touch with many members of the trade there whom we are pleased to number amongst our oldest subscribers. It is a delightful part of the country for business, health, or pleasure, and although the time selected was not the most favourable for a visit, my short tour in the first week of December was an enjoyable one. Perhaps it was all the more enjoyable because it proved to be such an agreeable contrast to my recent experience in Lincolnshire and Yorkshire. Many persons, no doubt, think that the weather should not be a matter for consideration to such a ubiquitous traveller as myself; but quite apart from personal comfort, the weather plays an important part in such a tour as the one I am describing. To call on a retail dealer on a rainy day when customers are few may have the advantage of finding him disengaged, but this is heavily discounted by his dissatisfaction with the paucity of business. I usually obtain the most information from the busy dealer—though sometimes I have to call again for it. There were several features about this journey that increased my interest in it. One was that I found retailers busy with their preparations for the Christmas displays. Some had their windows already dressed, and others were busy dressing them, but all seemed to be full of hope—and, what is of even more significance, of belief—that the Christmas trade would be a good one. Never in all my experience have I known such a general anticipation of a good season. This is made evident in all the great stores in London, and I was pleased to see the same hopefulness in Somerset and Devon. I am writing these notes before Christmas (and some of them may not be published until our February issue), so that I cannot yet say how far these bright expectations were justified. Christmas and the New Year have always given a fillip to retail trade, but the extraordinary development of the "Christmas bazaar" system in all trades is more pronounced this year than it ever has been. Bazaars are common enough in connection with all "stores" at Christmas, but this year, and in all parts of the Kingdom, I find individual shopkeepers of the older type—staid, steady-going tradesmen—making their windows and their shops bright and attractive with things suitable for presents. Without including toys and games, as the "stores" do so successfully, these sedate, orthodox china and glass dealers relieve the quietude of their normal winter trade by selling things suitable for presents at this season. In the West of England, glass and china dealers are making a really good display of fancy and artistic lines. They will find that the results of an interesting, and therefore attractive, window display are far-reaching, and include an effective advertisement of their shop not otherwise obtainable. The illustrations we give from time to time of some of the elaborate window dressings and splendid showrooms in London will, we hope, give useful hints to provincial dealers on the art of showing goods, and especially on the value of an assortment of fancy knick-knacks for presents. There is an increasing demand for small pieces of artistic porcelain and glass that a lady can carry away with her in her reticule as souvenirs for personal presentation to her friends. Dealers in the district I have just visited are alive to this, and are providing for it. There is another feature about retail trade in the West of England that is not so satisfactory as the one I have alluded to, but it is an important one, and must be mentioned. Several old-established dealers (and in more than one town) complain, and I think with reason, of the unfairness of the encouragement of trading by means of club-tickets, issued in connection with churches and chapels. The original intention of these "clubs" was no doubt very praiseworthy—namely to encourage thrift by enabling working men and women, by making small weekly payments to the "club," to save up money for things they could not purchase by one sum. When they have subscribed an amount sufficient for what they require the "club" gives them a ticket authorising them to obtain what they want from a tradesman, who then allows them a cash discount. The authorities of the church or chapel conducting the club, of course, select the dealers who are to supply the goods, and thus far the arrangement is to the advantage of the tradesman and the customer. But I am told of instances in which those authorities are not content to conduct these clubs solely for the benefit of their members, but are requiring the tradesmen upon whom they give these tickets to allow them a commission—which is an additional deduction to the discount allowed the subscribing members. I was told of two instances in which tradesmen who declined to allow this commission were struck off the list of those supplying the club members. It is very unjust to tradesmen whose profits are not large for people who pose as philanthropists to try to make money for themselves in this way. My first stopping-place was



HATCHER & SONS, LTD., TAUNTON.

TAUNTON,

the county town of Somerset, with a population of 22,500. It is an interesting place, both on account of its antiquarian features and its modern developments. It has very enterprising civic authorities who are doing much to encourage visitors and to secure permanent residents. The town was founded in 710, and now in 1912 it is an up-to-date capital, well drained, electrically lighted, a great railway centre in the middle of a large agricultural and sporting district—a place of no mean commercial enterprise, and is well known as the home of several modern educational establishments. Taunton is a remarkably clean town, with wide streets and many attractive shops, and there are trees in many of the thoroughfares. The Parade is one of the most curious shopping localities I have ever seen, with its attractive arcades. There are many places of great historical interest in the town, and though some of them were pointed out to me, I could not spare the time to inspect them closely, as I should have liked to do, since I had to concentrate my attention on the shops.

Hatcher & Sons, Ltd., have extensive premises in the High-street, one of the principal trading streets in the town. They are house furnishers and drapers, and are also glass and china dealers with a large and well-selected stock of goods in all departments of our trade. It is one of the oldest established firms in the town, having been in existence for considerably more than a century. Until about twelve years ago, it was carried on in the name of Vile & Son, and has always had the reputation of supplying goods of the best manufacture. Mr. Vile, who is now an alderman of the town, was well known in the trade, and when he retired the business was taken over by Hatcher & Sons, Ltd. The trade is chiefly a high-class one, and the customers include many of the best county families within a radius of upwards of thirty miles. At the same time the company cater for the industrial population, composed largely of shirt, collar, silk, and box-making employees. The general drapery, millinery, and ladies' outfitting showrooms occupy Nos. 11, 12, and 13, High-street, while their showrooms for glass and china are at Nos. 14, 15, and 16 in the same street, and are under the management of Mr. H. G. Wyatt. We give an illustration of a section of this department, reproduced from a photograph taken especially for us. The stock is comprehensive and well selected, and includes examples of Copeland, Wedgwood & Sons, Royal Worcester, Crown Derby, Minton, Bretby, Carlton, and many other high-class makers. Cut glass, by some of the best houses, is also well represented. The company stock all kinds of glass used by licensed victuallers, and do an extensive trade in it, though they do not canvass for it. They have also been successful in obtaining important contracts for glass and pottery for the Somerset and Bath Asylum, and for many of the higher grade schools, which are numerous in the neighbourhood. Although they conduct so many other branches of retail business, the glass and china trades are efficiently catered for. The company make a feature of careful attention to orders for matching. They say they find that a little trouble taken in this and similar comparatively small matters does much to keep a country trade together. They also are great believers in the value of a good window display. We give an illustration of their window. The contents are attractively arranged, and are frequently changed. They find the public always respond to the appeal of their windows. I was pleased to hear that their china department has had its share of the recent improvement in trade generally.

A. E. De Breffe & Co., 48, North-street, Taunton, are upholsterers, cabinet makers, and valuers, but they have an interesting front window that attracted my attention. In it they display a large and choice collection of antique china and glass of nearly every description. The pieces most prominently shown are suitable for Christmas, wedding, birthday, and other presents. They have commodious showrooms, and they invite the public to inspect them. It is not often that dealers show antiques specially for presentation purposes, but De Breffe & Co. demonstrate the wisdom of doing so, by their very tempting display of choice things at moderate prices.



A Section of Hatcher & Sons' China Department.

Belben Bros., wholesale and retail hardware, china, glass, and fancy goods dealers, have a large shop at The Bridge, Taunton. At the time of my visit they were arranging their Christmas show, and were apparently giving up the greater part of their premises to that purpose. Fancy goods and toys greatly predominated, and most of these were in medium qualities. I understand they have shops at Yeovil and Wincanton, which are supplied from the Taunton depôt. Their account of the regular china and glass trade in Taunton was not very

roseate. They complain of the competition of Co-operative Societies, but more particularly of the club ticket system to which I have referred. The principle of saving money for particular purposes by small weekly instalments is a good one, and it is a pity that it should be made the medium of an injustice to tradesmen. Messrs. Belben's stock seemed to include a great proportion of foreign goods, but perhaps the Christmas trade (particularly in toys) accounted for this.

Arthur Steevens & Co., Ltd., East-street, Billet-street, Taunton, are complete house furnishers, with an excellent range of premises. They have a very large stock of goods in all departments, but furniture and English and foreign carpets and rugs are their principal lines. They have a number of large showrooms admirably arranged. They devote considerable space to pottery and glass of all descriptions, and have a long and nicely fitted showroom for our goods, with an attractive window display. They claim to have the largest general stock of goods in the West of England, and to include in it everything for the home. If their stock of china and glassware is not the largest it is, at any rate, complete in all branches, and more especially in goods of every-day use. The range of toilet ware especially is an extensive one, and is quite up to date as to shapes and decorations. They were making a special show of useful and ornamental goods suitable for Yuletide gifts. The company are also dealers in antiques—in furniture, china, pictures, and curios, and make a feature of warehousing and removing furniture—the latter by their own traction engines and by rail.

W. & A. Chapman, Ltd., North-street, Taunton, are general drapers and complete house furnishers, cabinet makers and upholsterers, with a very well stocked pottery and glass department. It seems to be generally understood that glass and china are stocked by large drapers and furniture dealers. Messrs. Chapman evidently do a large trade in drapery, millinery and furniture, and their window displays in these branches are very attractive. They, however, cater very adequately for the purchasers of pottery and glass, and have excellent showrooms devoted to our goods. Their stock includes a varied assortment of toilet services and loose toilet ware of the newest designs. They also stock flower pots and vases, pedestals and pots, a good variety of bulb bowls, and a number of artistic and fancy goods. The pottery and glass ware is mostly of the good medium qualities, but they also show specimens of the best lines, particularly in art ware. They have goods of most of the well-known manufacturers both of pottery and glass, and have a large family connection. There is a mixed population to cater for in Taunton, and the company therefore stock wares suitable to nearly all classes. It is a well frequented market town, and customers come in regularly from the surrounding district.

(To be continued.)



Arthur Steevens & Co., Ltd., Taunton.

U.S. Pottery Imports during the first nine months of 1912 were valued at $7,049,000, showing a marked decrease.

Japanese Pottery Exports during the first three quarters of 1912 were valued at £418,800, showing a slight falling off.

PROGRESSIVE RETAIL DEALERS.

IT is sometimes said, and we have said it ourselves, that retail dealers in china, glass, and earthenware are not amongst the most pushing of modern tradesmen. There is reason to think that if glass and china dealers in some districts had displayed a little more business enterprise, the drapers and the furnishing houses would not have taken the large slice of their trade which they have obtained. In recent years our dealers have put increased energy into their business methods, which they have brought more up to date. Some instances of this have come under our notice in the last few months, and a few notes about them will, we hope, encourage others—dealers whose trade seems to be lagging—to go and do likewise.



MR. T. ABBOTT, KINGSTON : NEW WINDOW.

MR. THOMAS ABBOTT, of Kingston-on-Thames, one of the oldest glass and china dealers in the county of Surrey, was until quite recently the occupier of the most quaint and old-fashioned premises in the oldest of "Ancient and Royal" Boroughs. They were not convenient from a business point of view, but they suited him, and for many years suited his customers. They were well fitted and well stocked, and in his curious old-fashioned bow-windows was to be seen as choice specimens of high-class porcelain and the best Stourbridge glass as could be found in any shop in the West End of London. The other parts of the premises had not been modernised at all, though the shop itself had been to a slight extent. Massive oak beams a foot square are very interesting, but they take up too much space in a small retail business, and a show-room panelled in oak, and that had for more than a century been a sitting-room, was very interesting from a sentimental point of view, but they did not assist retail trading facilities. If Mr. Abbott had been solely an antiquarian, he would not have interfered with those time-honoured features for any consideration. But he is as shrewd and up to date a man of business as any in the trade, and he recognised that in these practical, pushing days, a dealer who wants to increase his business must not be governed by sentiment, and so, after mature consideration, he decided to move to premises with less historical interest than those he really loved, but possessing modern conveniences as a china shop. He has accordingly moved from 35, High-street, Kingston, to commodious premises at No. 30, High-street. He has now an excellent shop with a large and handsome front window, of which we give an illustration. Mr. Abbott does a very high-class trade, and his front shop is devoted principally to ornamental and the best grades of useful pottery. There are specimens of Coalport, Copeland, Crown Derby, Doulton, Mintons, and other first-class manufacturers. He has a room given up to china dinner, tea and breakfast ware, another to toilet ware, another to semi-porcelain and earthenware, and yet another for glass ware. Although

he has only recently occupied these new premises, he says he already finds it a great convenience to take a lady requiring tea ware, dinner ware, or toilet ware, to a room specially given up to each line. There are rooms above for storing stock, and there are packing rooms at the rear of the ground floor. Mr. Abbott and his son are expert rivetters and repairers of broken china and glass, and in his new premises there are two large workrooms expressly fitted for this branch of business. We had an opportunity of going over the premises a few days ago, and though we were always deeply interested in the ancient history of No. 35, High-street, we congratulate Mr. Abbott on the more convenient new shop and premises he has acquired.

attractive window display. They have a handsome double-fronted shop. We give an illustration of their window reproduced from a photograph specially taken for us. The window is dressed for the Christmas and New Year's trade, and good use is made of attractive window tickets. The arrangement of goods in the window on the left is very effective, particularly the display of teapots—a good Christmas line. Without over-crowding, most of the useful things required in a home are shown, and the collection of artistic and fancy wares in the window on the right is especially appropriate to the season. The window tickets, "Useful and Artistic for Christmas Presents," are in good taste. Customers are often led to make purchases when their attention is drawn to them



LISTER'S STORES, KEIGHLEY.

LISTER'S CHINA STORES, Bridge-street, Keighley, is another very old business that has been influenced by the spirit of modern enterprise. Mr. Tom Lister has one of the oldest glass and china shops in the United Kingdom. It has been in the hands of the Lister family for considerably more than a hundred years without a break. It has always been recognised as a family trade, with a good connection amongst all classes. They do both a wholesale and a retail trade, and while they stock goods of the best qualities, their principal trade is in medium class household requisites. They have a large and increasing retail trade, and with the view of adding to it, they make a very in this way. The business is controlled by Mr. Tom Lister, who is well known throughout the district, and whose aim is always to sell a good article at a reasonable price.

Belgian Duties on Metal-coated Porcelain.—Tea or coffee sets, cups, and statuettes of porcelain, wholly or partly covered with a thin layer of metal, are dutiable on importation into Belgium as follows:—If the metal is a precious metal, as jewellery, at 5 per cent. ad val.; if the metal is a common metal—statuettes as furniture at 10 per cent. ad val., other articles as small wares at 13 per cent. ad val.

COMMUNICATIONS FROM THE COUNTY POTTERY LABORATORY OF STAFFORDSHIRE.

XL.—THE CHEMICAL CONSTITUTION OF THE KAOLINITE MOLECULE (II).*

By J. W. Mellor and A. D. Holdcroft.

MR. ALLAN B. DICK kindly offered to furnish us with a small quantity of crystalline kaolinite for analysis, and for experiments on the heat curves under similar conditions to those employed in Part I. This has been done in view of the details previously published (*Trans. Eng. Cer. Soc.*, 9, 94, 1911; *Pot. Gaz.*, 36, 680, 1911). There is no need to give anything more than the experimental results.

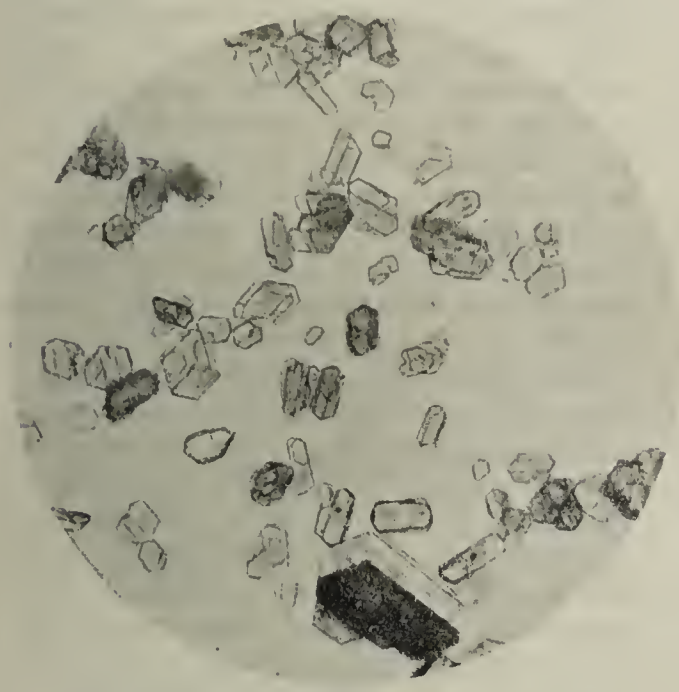


Fig. 1.—Butler's Kaolinite (x 120).

Fig. 1 represents the appearance of a sample under the microscope (x 120) as photographed by Mr. F. C. Austin. The analysis of a sample, dried at 110 deg. to a constant weight, furnished :—

	Per cent.
Silica (SiO_2)	45·04
Titanic oxide (TiO_2)	nil
Alumina (Al_2O_3)	38·58
Ferric oxide (Fe_2O_3)	0·14
Magnesia (MgO)	0·01
Lime (CaO)	0·38
Potash (K_2O)	0·18
Soda (Na_2O)	0·13
Loss on ignition	15·94
The loss on ignition included :—	
Water (H_2O)	14·44
Carbon (C)	0·80

The kaolinite supplied to us was contaminated with a few small fibres, probably derived from the bolting cloth. This does not

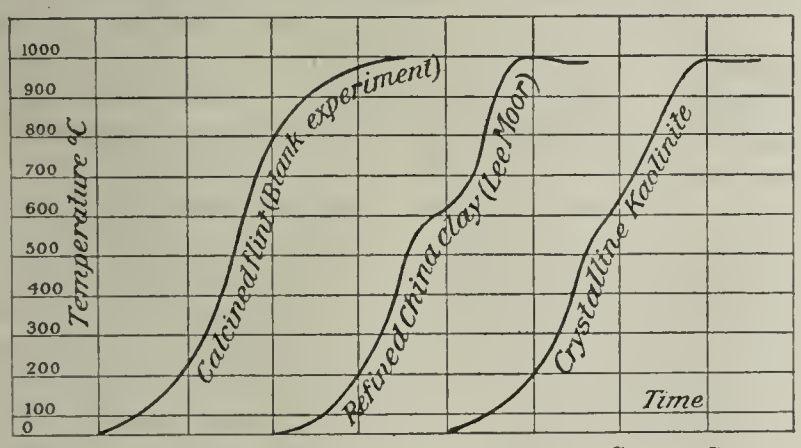


Fig. 2.—Heat Curves of Kaolinite and China Clay.

appear to be the source of all the carbon. The nature of the impurity in Butler's kaolinite is not known. Mr. Dick says "someone must go to the mine and investigate the matter if the truth is to be known." Part, at any rate, of the impurity is volatile, since oily drops distilled from the clean crystals while they were being heated in tubes during the experiments described below. The water, it will be noted, is a little greater than corresponds with the formula $Al_2O_3.2SiO_2.2H_2O$.

Fig. 2 shows the heat curve of the sample of crystalline kaolinite. The corresponding curves for Lee Moor china clay and for calcined flint are shown on the same diagram. The latter shows the way the temperature rises under normal conditions. The feeble terrace in the crystalline kaolinite curve is due to the fact that, unlike china clay, the crystals of kaolinite decrepitate, or exhibit a similar phenomenon, since much is projected from the crucible during the necessarily rapid heating. The thermal effect is not then so pronounced, because of the smaller quantity of material remaining in the crucible. There is also another difficulty. Rapid heating is necessary to get well-defined critical positions on the pyrometer curves. A similar phenomenon occurs with crystalline pyrophyllite, but not with china clay. The intervals between the ordinates represent "10 half-minutes." The thermal phenomena are therefore similar with both Lee Moor china clay and crystalline kaolinite. The crystals do not lose their external shape on ignition.

The loss of water which occurs on heating china clay and kaolinite at different temperatures is shown in the following table. This further emphasises the fact already found to obtain with china clay : There is no definite temperature of dehydration even with the well-defined crystals, illustrated in Fig. 1.

Loss on Ignition of China Clay and Butler's Kaolinite when Heated for One Hour at the Different Temperatures.

Temperature.	China Clay.		Butler's Kaolinite.	
	Vacuum.	Atmospheric P.	Vacuum.	Atmospheric P.
300°	·24	·26	1·66	1·82
400°	·89	·57	1·70	1·91
425°	1·43	·68	1·80	—
450°	3·38	·80	2·72	—
500°	8·48	1·19	4·96	2·41
550°	—	—	8·20	6·00
600°	—	11·92	11·58	10·88
Loss on ignition	12·64		15·94	

The results are plotted in Fig. 3.

Mr. Dick exposed a clear crystal of kaolinite on a bath of melted lead for 15 minutes. He says that this treatment did not dehydrate the mineral in the least, for if it had the refractive index would have altered, which was not the case. He adds : "The temperature of the molten lead would probably have reached 400°."

We are glad to add that since our paper was published, R. Rieke (*Sprech.*, 44, 637, 653, 1911) and A. M. Sokoloff (*Ker. Rund.*, 20, 365, 1912) have applied somewhat similar methods to some continental clays with analogous results. H. Stremme (*Forts. Min. Krist. Pet.*, 87, 1912) recommends the formula we labelled "VI" to the one we ourselves preferred and labelled "VII" (or VIII). To repeat what we previously published : "At present it does not matter whether we take VI or VII as our standard. The arguments in this paper remain the same whichever be taken." L. Lefèvre writes a criticism of our communication in *La Ceramique* (14, 183, 1911). Unfortunately, Mr. Lefèvre does not appear to have read the original paper ; nor has he contributed anything new to our knowledge of this subject. There is, therefore, nothing to justify a reply from us.

Note by Mr. Allan B. Dick.

The crystalline kaolinite above referred to was obtained from Dr. Butler, who described the occurrence of this mineral in the coalfield of Glamorganshire.*

In that paper the mineral is stated to fill veins or joints, varying in thickness from a slight film to a quarter of an inch. It is correctly said to consist "almost entirely of small hexagonal plates and rouleaux of the same, which have the characteristic form and appearance of kaolinite. Maximum refraction index 1·57, minimum greater than 1·56. Plates lying flat against the slide show a refraction index of very nearly 1·56 and exhibit little or no birefringence.

"A determination of water by ignition in a portion practically free from calcareous and carbonaceous matter gave 13·78."

It was not possible to obtain, free from impurities, the considerable amount required to determine a heating curve, so that what was employed contained small fragments of coal, pyrites, quartz, spar, and a much larger quantity of some other mineral estimated at 10 or 15 per cent. What that mineral is has not been determined, as it could not be separated for analysis. It blackens when heated, glows, and finally leaves a white ash. The organic matter is not extracted from it by ether or chloroform. Possibly it is some mineral like halloysite or montmorillonite. These minerals generally darken on heating, but this impurity seems to contain more organic matter than they do.

* Adapted from *Trans. Eng. Cer. Soc.*, 10, 169, 1912.

* "Natural History of Kaolinite," Francis H. Butler, M.A., &c. *Mineralogical Magazine*, Vol. XVI., No. 73.

In regard to the statement in the paper referred to that the hexagonal plates show little or no birefringence, the observer had no doubt fallen into the same error as I did when I said the Anglesea kaolinite could by crushing gently on the slide be made to yield plates so thin as to exercise no effect on polarised light. That is true only with ordinary illumination. In direct sunlight, concentrated by a condenser of low angle and focussed on the slide as for a critical image, all plates—even the very thinnest—show well marked birefringence.

It should be noticed that when the rouleaux are broken up they yield hexagonal plates, whereas the rouleaux in china clay and other clays never produce hexagonal plates. The rouleaux like those in clays give unsatisfactory extinctions when viewed between crossed nicols. The extinction is always more or less parallel to the apparent striation. This is probably due to the plates changing by reflection of the plane of the incident polarised light, so that when subsequently analysed there is apparent straight extinction.

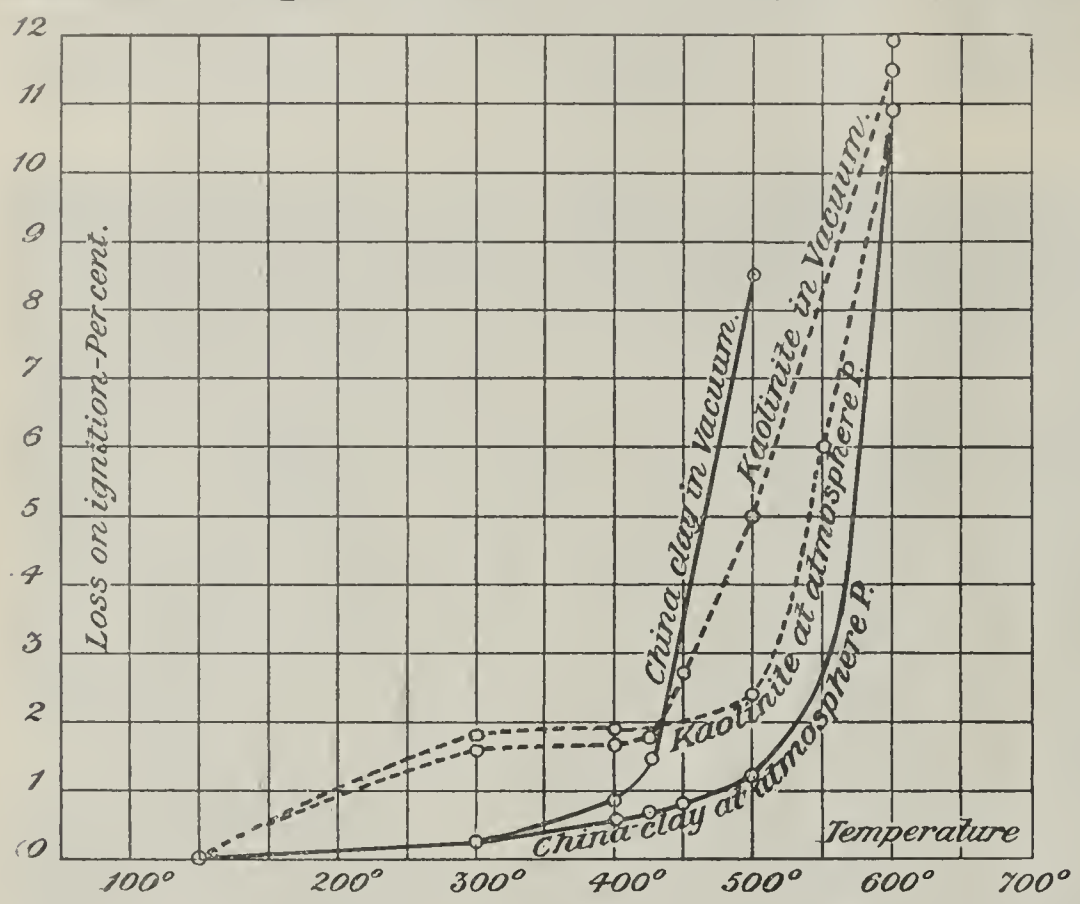


FIG. 3.—DEHYDRATION CURVES OF KAOLINITE AND CHINA CLAY.

Porcelain Table Ware to the weight of 24,429·9 metric tons, valued at £1,139,400, was exported from Germany during the first nine months of 1912. The figures show a slight falling off.

Glost-Kiln Enamels on Stoneware.—According to Berdel ("Keramische Zentralblatt"), the decoration obtained on stoneware by means of glost-kiln enamels can hardly be surpassed for brilliance and purity of colour. The attainment of success depends on the fulfilment of two main conditions—the mass must give a delicate waxy lustre on sintering, and the glaze must be capable of being applied thickly and melt perfectly smooth at the temperature of 70·2-4 Seger cone, without running. A good mass is prepared from about 38 per cent. of clay, 37 per cent. of quartz sand, and 25 per cent. of felspar, together with levigated, plastic stoneware clay. To this mass, which bakes a yellowish grey at the above named temperature, is added 5-10 per cent. of red-burning clay; or it may be coloured with $\frac{1}{4}$ per cent. of cobalt oxide and $\frac{1}{2}$ per cent. of nickel oxide, or $\frac{1}{2}$ per cent. of chromium oxide or the like. Sintering can be improved by the addition of $\frac{1}{2}$ per cent. of fluor spar. The author recommends as glaze:—140 felspar, 16 ZnO, 50 $BaCO_3$, 30 marble, 40 or 25 Zettlitz kaolin or fine white clay, and 100 or 78 quartz sand. The colour is obtained with 3-5 per cent. of tin oxide, or 3-6 per cent. of cobalt oxide, &c. The fusing point of the enamel may be raised by increasing the proportion of clay or quartz.

THE SALE OF THE SOLON POTTERY COLLECTION.

(FROM OUR POTTERIES CORRESPONDENT.)

THE sale of the Solon Collection of Pottery, created quite an unprecedented amount of interest locally, and was largely attended by North Staffordshire collectors and by connoisseurs from various parts of the country and from abroad. Three days were devoted by Charles Butters & Sons, of Hanley, the auctioneers, to the disposal, the collection numbering in all 683 pieces. The sale of the slip decorated and other early English wares took place on the first day, Nov. 26, and, as stated in last month's Notes, realised £2,000. The second day's business brought the total up to £4,349, and the third day's sale made the aggregate realised £5,849. The business of the second day was the most interesting, for it included the 123 pieces of salt-glaze comprised in the collection, a dozen examples of Mr. Solon's pâte-sur-pâte, and many valuable foreign pieces. The disposal of the salt-glaze served to show how much this class of pottery—an essentially Staffordshire production—is growing in value. The highest sum realised in this section was for an undoubtedly unique example—a group of two figures seated on a bench—very quaint in its design and quite unpretentious in its modelling. The body was of white ware, touched up with brown slip, the height being 5 in. and the length about $7\frac{1}{2}$ in. Figures of any kind are rare in salt-glaze, and more especially a group of this kind, which accounts for the sum paid for it—namely, £205. The purchaser came from Bishop Auckland, New Zealand. A figure of Queen Anne, stained with a rubbing of zaffres, height $7\frac{1}{2}$ in., fetched £50. A noble piece of salt-glaze—a drinking mug with cover, standing $9\frac{1}{2}$ in. in height, decorated with a portrait of Admiral Vernon, and bearing the inscription "G. R. Portobello, taken by Admiral Vernon"—realised £110. The next highest price in the salt-glaze section was £100, paid for a water ewer with enamelled decoration of a very refined character in the Chinese style. The wash-hand basin belonging to this piece is in the Schreiber Collection at South Kensington.

Other remarkable prices for salt-glaze were:—£62 for a beautifully potted cruet stand with four bottles, skilfully enamelled in the Chinese style; £50 for a cylindrical mug, bearing in relief the coats of arms of the Hales, Leveson-Gower, Vane and Bertie families, the subject being "The Midnight Conversation" after Hogarth; £41 for a cubic tea caddy, with pastoral scenes painted in enamels of particularly harmonious colours, and the inscription "Fine Bohea Tea"; £32 for four tiles with subjects in relief—these were from a mantelpiece in Thomas Whieldon's house, and probably were made by him. There were four salt-glaze pieces with the dark blue ground characteristic of and generally attributed to Littler, of Longton Hall, who first made china in Staffordshire. The highest price for these specimens was £31—the amount paid for a small basket which had, in addition to the blue glaze, size gilding as a decorative feature. The other three pieces, all teapots, fetched £27, £21, and £10 10s. respectively. Probably more teapots than any kind of goods were made in salt-glaze; certainly there was a very large number in this collection, and they realised from £5 for a tiny globular teapot, with patches of blue, to £47 for a teapot and cover, globular shaped, and decorated with a maroon ground and reserved panels of flowers and birds in enamels. A sum of £36

was paid for a teapot and cover, globular shaped, and enriched with a portrait of the King of Prussia ; and £33 for a teapot and cover, cylindrical shaped, and decorated with a turquoise ground and pink roses. Two early salt-glaze teapots with stamped ornament of the kind used by the Elers realised £22 and £10 10s. respectively ; a purse-shaped teapot of the well-known pecten shell pattern fetched £15 10s. ; teapots in the form of houses made £11 10s. and £7 respectively ; and a teapot in the shape of a camel realised £8. Twelve plaques in pâte-sur-pâte by Mr. Solon made from 15 guineas to 31 guineas. Among the foreign pieces two were of special interest—one a group representing St. Jerome and the Lion, of fifteenth century Spanish ware, which realised £32 10s. ; and the other a beautiful example of Böttger's polished red ware, a mug engraved "Tu ne me les oteras pas," which was sold at £30.

The third day's sale comprised Elers & Astbury pottery, stoneware, English Delft ware, and the pottery decorated with coloured glazes of the Whieldon period. Elers ware does not as a rule realise the prices that might be expected, considering its beauty and rarity, and the probable reasons are the difficulty of definitely attributing pieces to the Dutchmen and the many products that came from their imitators.

Two pieces, a jug and a small teapot, which by their body and decoration, as well as their history, could be safely attributed to the Elers, made at this sale £10 and £11 respectively. A remarkable piece, which Mr. Solon for excellent reasons attributed to the Dutchmen, was a teapot of the characteristic red ware, decorated not only with relief ornament, but also with scrolls of white enamel touched up with green. This was knocked down at £14. A number of Astbury pieces were included. A beautiful little coffee-pot of red ware, with applied ornaments of yellow clay, fetched £7 10s. ; and a like sum was realised for a rare cream jug of yellow ware, with applied ornaments in yellow clay. A small teapot of black ware, with applied vine leaves in yellow clay (? Astbury), was sold for £12. In the stoneware section the top price was £28 for a beautiful Frechen jug with Elizabethan silver mountings. The other chief stoneware prices were :—£25 for a Nottingham puzzle jug of crown stoneware, inscribed "Gentlemen, Come Try Your Skill" ; £19 for a Fulham mug of drab stoneware, inscribed "Drink to the Pious Memory of Good Queen Ann, 1729" ; £17 for a small stoneware bottle of marbled clay by John Dwight, found in the Fulham trouvaille ; £15 for a Nottingham mug of brown stoneware, with applied ornaments consisting of huntsmen, dogs, houses and trees, silver mounted ; and £7 10s. for a Fulham drab and brown jug, bearing as decoration Hogarth's "Midnight Conversation." The following were the chief prices realised for English Delft or tin-enamelled ware :—£30 for a hexagonal dish, painted with the Brewers' arms, and the date 1681 ; £21 for a dish, decorated with the figures of William and Mary ; £19 10s. for a sack jug, dated 1649 ; and £14 for a dish bearing the figure of the Duke of Marlborough.

The sale concluded with 114 pieces of coloured glaze ware, commonly known by the generic term "Whieldon." The highest price realised in this class was £75 for what was one of the most beautiful pieces of the 683 offered for sale during the three days. This was a four-lobed teapot and cover with a double shell, the outer casing being perforated into a sort of lace-work pattern of leaves and apple blossoms, and the whole being enriched with coloured glazes. From the artistic point of view, no less beautiful was a jug of cream-colour, enriched with applied foliage, stems and rosettes, pencilled with coloured glazes, which fetched £70. This was made by Whieldon for his milkman, Ralph Hammersley, and bore the inscription "R.H., 1757." As a matter of fact, this is practically the only piece that can be without any doubt assigned to Thomas Whieldon. Probably the highest price ever paid for a Toby jug was given at this sale, namely, £70. The jug was of cream ware, enriched with tortoiseshell glaze, the figure holding in its hand a small pot of red clay. The fact of the use of the two different clays, and the early period to which it undoubtedly belonged, accounted for the high amount paid. Some of the other prices were :—£30 for another Toby jug ; £36 for a small figure of a man seated and drinking, coloured glazes ; £30 for a figure of a huntsman, tortoiseshell glaze ; £30 for a small figure of a man playing the hunting horn, coloured glazes ; £18 for a coffee-pot and cover, tortoiseshell glaze ; £16 10s. for a coffee-pot and cover of cauliflower ware ; £13 for a cream jug and cover of pineapple ware ; £13 for a teapot and cover of yellow clay, with white stamped ornament in relief, touched up with green glaze, attributed to Dr. Thomas Wedgwood ; £10 10s. for a double-handled drinking cup in the shape of a satyr's head, a remarkable piece, which was accidentally broken during the sale, and even then fetched the figure named ; and £10 for a figure of a bird on a stump, clouded with tortoiseshell glaze.

BOY LABOUR AT NIGHT IN CHINA CLAY AND GLASS WORKS.

A REPORT has been issued by the Departmental Committee on the Night Employment of Male Young Persons in Factories and Workshops.

It will be remembered that the Government proposed to prohibit the employment of boys at night in glass houses. It was felt that this would have serious consequences on the industry, and the initiative was taken by the Flint Glass Makers' Union supported by the manufacturers in opposing the scheduling of the glass trade under the Act. When the Departmental Committee took evidence on the subject, Mr. J. S. Williams Thomas gave evidence. It is only justice to that gentleman to say that it was due to his clear and emphatic explanation of the conditions of boy labour in glass houses, as compared with the same labour in other factories, that the committee modified its recommendations.

The Report contains the following paragraphs:—

China Clay Works.—It appears that boys are not actually employed during the legal night period (9 p.m. to 6 a.m.) in any china clay works, but that the exception is required to cover the employment of boys of 16 to 18 years of age in two sets, the one set working from 6 a.m. to 2 p.m., and the other from 1 p.m. to 8 p.m. We are satisfied that there is no necessity for employment of boys under 18 years throughout the night in this industry, but we recognise that the circumstances are rather exceptional. The work is done out of doors, and can only be carried on during the fine weather. It appears that the boys are specially strong and healthy, and we think that the requirements of the trade might be met by a special provision authorising employment of boys of 16 years and upwards between 6 a.m. and 9 p.m. in two sets, provided that the period of employment for each set shall not exceed eight hours. We recommend that the present exception be withdrawn, subject, however, to its being found practicable to authorise the employment of boys as suggested above.

Glass Works.—We are satisfied that the process of glassmaking, as it is now usually carried on, is necessarily continuous in order to avoid serious loss from waste of fuel and materials, and that night work is therefore unavoidable at the present time. We have heard evidence

from every section of the glass trade affected by our inquiry, and have visited numerous glassworks in various parts of the kingdom, and we should say that our conclusions with regard to the injurious effects of night work are, perhaps, better exemplified in the glass trade than in any other of the industries with which we were concerned. A large number of boys are employed in glassworks, and, as to the nature of their employment, we are of opinion that it is hard, continuous and fatiguing work for boys of 14 years.

We find that though the weekly total of working hours is usually about the same, yet the length of shift and the intervals between the spells of work vary very greatly. (a) In glass bottle works there are, as a rule, two shifts of about 11½ hours each, including one hour for meals, and we consider that so long a period of employment is too great a strain for boys under 16 years of age. A similar period of employment is found in plate-glass works. (b) In flint-glass works the 6-hour shift system, to which we have already taken exception, is adopted. (c) In the pressed-glass trade, where pot furnaces are used, the shifts are so arranged that a boy accomplishes about 14 hours work within a period of 24 hours, after which he will be unemployed for about 32 hours, and so on. It is true that in this last instance the shift is one of 8 hours' duration only, but we cannot doubt that such irregular alternations of work and rest, regardless of the normal times for sleep, must be bad for the boys. (d) In sheet-glass works, where the work is hard, the hours are arranged on the system of three shifts of 8 hours each.

Though it seems possible that, by the introduction of labour-saving machinery, the necessity for employment of boys may in course of time be greatly reduced, any such change is likely to be very gradual. Unfortunately the increased use of machinery often tends to displace the skilled workman rather than the boys, though we understand that in France use of mechanical appliances is, to some extent, doing away with the employment of boys for carrying the bottles to the annealing ovens. It must, however, be recognised that at the present time a large number of boys are required to carry on the industry in this country, and that a considerable proportion of those now employed are under 16 years of age.

We have been told that great difficulty would be experienced in obtaining the requisite number of boys at the age of 16 years, but as against this it has been stated that, in one at least of the chief centres of the industry where this difficulty would arise, there is no other occupation available for the boys except that of coal-mining. It is to be regretted that, owing to the number of boys required in the bottle trade and in the pressed-glass trade being equal to or even greater than the number of men employed, many of these boys can never be apprenticed and, therefore, the occupation is largely a "blind alley" form of occupation for them. This consideration probably deters parents from sending their boys into the trade, and may partly account for the difficulty, said to be experienced in some districts, of getting a supply of boys. In spite, however, of the foregoing disadvantage, it would appear that the ease with which the more unskilled operations can be learned, and the high wages obtainable by skilled workmen in the glass trade, attract boys to it. On the whole, we think that this would continue to be the case even if the age for night employment were raised to 16 years.

Many of the witnesses laid great stress on the importance of early training in order to produce efficient workmen. We have carefully considered this aspect of the question, and as the result of the evidence before us, and also of our personal observation during visits paid to glassworks, we are of opinion that no boy of 16 years and of average intelligence would find any difficulty in properly learning the trade. The real difficulty appears to lie in the regulation enforced by certain trades unions that a boy must be apprenticed by the time he is 16 years old, or not at all. The result of this rule is that at present a boy who fails to get apprenticed by the time he is 16 can never become a journeyman, or earn more than boys' wages. There seems, however, to be no doubt that in the event of the age limit for night employment of boys being raised, the trades unions would have to amend their regulation.

We have little doubt that the glass trade was formerly hard pressed by foreign competition, but we are satisfied that our manufacturers are year by year employing better methods, and that, probably as a consequence of this, they are now better able to contend with foreign competition, severe though it is. Another factor, which has doubtless contributed largely to the present improved position of the trade, is the better education and more temperate habits of the workmen, and for all these reasons we think that we may look forward to a continued improvement in the position of the glass trade as a whole. We recognise, however, that owing to the large proportion of boy labour in the trade, and to the fact that foreign competition still presses heavily on our manufacturers, though in a less degree than formerly, it is not desirable to do anything that would cause too sudden a disturbance of trade conditions, more especially as nearly all our witnesses, both employers and employed, urged the necessity for boy labour. On that account we have so modified our recommendation as should, we think, allow time for the trade to adapt itself to the alteration we propose.

We recommend that the age for employment of boys at night in glassworks be raised to 15 years now, and to 16 years in January, 1916. We further recommend that in any future amendment of the Factory Act, the actual hours of employment or shifts should be more definitely specified, and it should be made illegal for boys to work on a night shift for a longer period than a week at a time. The Act does not at present guard against this being done.

Pottery in "Milestones."—It is appropriate that a play of which a native of the Potteries—Mr. Arnold Bennett—is author should illustrate the changes in the fashions of decorative crockery during the past half-century. The scene of "Milestones" is the same room at three different periods—the 'sixties, the 'eighties, and the present day. The mantelshelf ornaments in the first act comprise two glass lustres and a pair of Wedgwood urns. These have been removed in the second act and are supplanted by two blue and white Chinese jars and two willowy green-jacketed china figures which reveal the influence of the æsthetic craze. In the third act the jars remain, but the Wedgwood urns have been resuscitated to supplant the figures. The floral decorations of the room consist of wax flowers under a glass shade in the first act, a palm in an art pot in the second, and a china bowl of rosebuds in the third. The changes in the decoration of a West End drawing-room in harmony with the three periods are very cleverly represented—so also are the changes in the manners and customs of the occupants—in this excellent play.



THE POTTERY REGULATIONS INQUIRY.

(BY OUR POTTERIES CORRESPONDENT.)

THE Home Office inquiry regarding the proposed "Regulations for the Manufacture and Decoration of Pottery" was concluded at Stoke on Nov. 27—the third day of the proceedings—and the decision of the Commissioner, his Honour Judge Ruegg, K.C., is now awaited. Contrary to expectations, however, the issues which the Commissioner has to adjudicate upon have been narrowed down to the smallest limits. Every one of the four objections put forward on behalf of the Manufacturers' Joint Committee was settled by agreement, so that not a single recommendation of the Departmental Committee was contested by the manufacturers of the Potteries before the Commissioner. I will deal with the matters settled out of court later.

The principal question which Judge Ruegg has to decide is that of the temperature at which ovens shall be drawn—a matter which occupied at least a day and a half of the proceedings. This issue was not raised on behalf of the manufacturers; it came as an objection from the operatives as represented by the United Ovenmen's and Dippers' Society. The Regulation in question is No. 10 (d), which provides that in regard to the drawing of ovens, the temperature—whether taken at the bottom of the stage where the top drawer stands, or at any lower stage where men are working—shall not exceed 125 deg. F., except that where cooling dampers are in use and where there has been no unnecessary delay in setting in the oven, it shall be permissible, on the joint agreement of employer and employed, to suspend the rule not more than four times in any period of twelve months, subject to certain specified conditions. To this proposed rule Mr. W. Callear, on behalf of the Ovenmen's Society, objected, his application being that the maximum drawing temperature should be 100 deg.

The circumstances which led to the formulation of this regulation were dealt with in some detail at the inquiry, and so may be referred to here for the better understanding of the points in dispute. The Departmental Committee took a considerable amount of evidence on this subject, and the Ovenmen's Society, as represented by Mr. W. Elkin, then asked that the maximum temperature should be fixed at 110 deg., though they had been medically advised that it should not be greater than 100 deg. The limit asked for, they contended, was possible without affecting the output inasmuch as back clammings, dampers, and in some cases fans, could be used to hasten the cooling. The other evidence as to maximum temperature may be summarised as follows:—Dr. W. D. Prendergast, Dr. J. F. Arlidge, and Dr. A. A. Hill advocated a maximum of 100 deg.; Dr. H. H. Folker, Mr. Jabez Booth and Mr. S. Clowes advocated 110 deg.; Dr. T. M. Legge, Mr. J. Lovatt and Mr. J. A. Redgrave advocated 120 deg. The chief evidence as to the effect on health of working in high temperatures given before the Departmental Committee was that of Sir Thomas Oliver, who said that ovenmen were more liable to bronchial catarrh than other workers, and that of Dr. A. Rowley Moody, who gave the results of a number of experiments.

These were constantly referred to at the inquiry, and may be outlined here. He examined two men who had been working in an oven which had a temperature of 110 deg., taken 2 ft. from the top. The first man had a temperature of 99·8 deg. the normal being 98·4) and a pulse rate of 117; the second had a temperature of 99·4 deg. and a pulse of 110. On another day, he examined two men who had been working in an oven which was 190 degs. 2 ft. from the top, and which was so hot that they had had to stop drawing. One man had a temperature of 99 deg. and a pulse of 100; and the other a temperature of 100·8 deg. and a pulse of 169. On another occasion, he examined three men who had been working in an oven having a temperature of 120 degs. The first man had a temperature of 101·6 deg. and a pulse of 174; the second had a temperature of 100·3 deg. and a pulse of 130; and the third had a temperature of 99·4 deg. and a pulse rate of 130.

Two members of the Departmental Committee, Mr. Bernard Moore and the late Ald. Thomas Edwards (who was then agent of the Ovenmen's Society), were appointed to make investigations, and it was as a result of their report that the Departmental Committee made the recommendation of 125 degs. as the maximum temperature for oven drawing.

In last month's "Notes from the Potteries," I summarised the evidence which was given on the second day on this subject. When the proceedings were resumed on the third day further evidence was called by Mr. Callear in support of the Ovenmen's Society's contention. Mr. Wm. Benson, who had been an ovenman for forty years and also a fireman for thirty, said glost ovens had increased in size in his experience from 14 ft. 6 in. diameter to 20 ft. The result was that the ovens were hotter when being drawn. Being larger they took longer to fire. Moreover, they were now fired with slack instead of coal, which meant a longer firing time and a shorter cooling time. The witness averred that ovenmen "go under at forty, and some don't reach forty," but he admitted that he was 64, and had worked until last June. The witness created amusement by quoting a Pottery saying that "an ovenman should be strong in the arm and weak in the head." The Commissioner remarked, "I am sure you don't come up to the standard." And the witness replied, "Then I am not an efficient ovenman."

Dr. A. Rowley Moody, of Hanley, called on behalf of the operatives, said it was apparent to anyone that even for natives in the tropics it was deleterious to work in a high temperature; no work was done by them in the heat of the day unless it were absolutely under compulsion. To expect ovenmen, who were doing probably the heaviest work in the district, to work at a temperature of anything like 125 deg. was inhuman and brutalising to the men, and resulted in premature degeneration. He thought the temperature should not exceed 100 degs. for many reasons. The first was that the work was most arduous. Further, men working in a hot oven were, to a large extent, asphyxiated; the air was so rarified by the heat that it was impossible for them to take in sufficient oxygen to supply the needs of the body. This lack of oxygen was attended by a serious feature. The organs were working with a feverish activity, and the heart was working tremendously, as his experiments (summarised earlier in this article) had proved, and as anyone could see if the pulse rate were taken. This caused greatly increased tissue waste, and this being acompanied by an insufficiency of oxygen to dispose of this waste, there was an accumulation in the body. This statement was supported by experiments which had been made by Dr. John Cadman, Professor of Mining, and a Committee of the Birmingham University as to work in mines of high temperature. These showed remarkable body waste as a result.

Questioned on the economic side of the question, Dr. Moody urged that manufacturers would find it to their

advantage to have ovens drawn at lower temperatures, because the men after having been in a high temperature were in a frightfully distressed, nervous, and trembling condition, and were liable to and did cause damage to the ware as a result. Moreover, it was to the advantage of the manufacturer to retain his skilled workers at their best as long as possible.

Mr. J. Hunter Gray (counsel for the Home Office) questioned the witness at some length as to his evidence before the Departmental Committee. He admitted that so far as 125 deg. was defined as a limit, this was a great step in advance, but what he would like in the interests of the lives of the men was to get it very much lower. The reduction of the standard would have a considerable beneficial effect on their general health.

Dr. George Reid (medical officer for Staffordshire, and a member of the Departmental Committee), who had been called on the previous day, was then recalled on behalf of the Home Office to give the results of certain experiments he had conducted that morning. He did not, he said, wish to set any store by them, from the point of view of forming any conclusion, beyond making a comparison between the figures of Dr. Moody and these figures. The oven at the point where the Committee recommended the temperature should be taken—the foot of the top stage—was 98 deg. F., at the middle stage 92, and at the bottom stage 54. The men he examined had been working all day, and had been working continuously for twenty minutes before he examined them. In the case of the top man, his body temperature was 99·2 deg. and his pulse rate 80 deg. The temperature of the second man was 99 deg., and the pulse rate 80. The temperature of the third and lowest man was 98·6 deg., and the pulse rate 130. In order to compare Dr. Moody's records with his (Dr. Reid's), he took the mean of the temperatures of the two men Dr. Moody had examined, who were working in a temperature of 110 deg., and that was 99·7 deg. The mean of his (Dr. Reid's) records was a temperature of 98·9. He also took the pulses of the same men after an interval of fifteen minutes, and found that 80 had gone down to 68, 80 to 66, and 130 to 90, respectively. The probability was that the latter man had a normal pulse of 90. The conclusion from these experiments, so far as they could draw a conclusion from such limited data, was that manual work had more effect upon the temperature of the body than the temperature at which they were working, because in this case they were working in a temperature as low as 54 deg. and at the highest 98 deg. This was as compared with 110 deg. in the case of Dr. Moody, and the results were practically the same. The pulse was a matter of small moment, because it varied in individuals, and also because when they increased their work they increased their pulse rate. He could not, however, form any real conclusion from the few tests made.

Dr. Moody, being recalled, said that Dr. Reid's experiments, to his mind, showed the disastrous effect of raising the temperature of the place in which men worked to anything above the temperature of the human body.

The Commissioner at this point remarked that a case of some importance seemed to have been made out in favour of a reduction of the maximum temperature. He noticed the evidence given before the Departmental Committee by the medical men was pretty nearly all to the same effect.

Evidence was then given on behalf of the Manufacturers' Joint Committee as to the economic effect of reducing the standard. Mr. William Burton, chairman of the Manufacturers' Joint Committee, and a member of the Departmental Committee, said in the past ovens had been drawn at higher temperatures than 125 deg., and manufacturers would experience considerable difficulty in even complying with the maximum included in the proposed regulation. It was necessary to draw ovens before they had cooled in order to carry on the industry on the lines on which it was conducted in that and other districts at the present time. He agreed that larger ovens were now in use than formerly, but although they had been increased in size for economy in production, the cooling had been speeded by the introduction of means of artificial cooling.

Replying to the Commissioner, who wanted to be informed why the ovens need be drawn so quickly, the witness said it was impossible to do otherwise if they were to carry on the industry. More ovens would meet the difficulty, but it was impossible generally to build more, because the factories had no space for more.

The Commissioner: Assuming that 125 deg. is fixed as the maximum, could you give me any idea as to how long the ordinary oven would be before it cooled to that temperature?

Witness: Without cooling dampers, and if filled with flat ware, about two days and a night, or two days and two nights.

The Commissioner: What length of time would elapse before the oven cooled to 100 deg.?

Witness: Taking a normal oven, it might take twelve hours longer.

The Commissioner: How would that affect business?

Witness: From the economic and manufacturing standpoint it would be disastrous. This, the witness added, was one of the points which weighed with the Lead Committee when they fixed the maximum of 125 deg. Personally, he felt that the manufacturers had as much justification for claiming a maximum of 140 deg. as the men had to claim 100.

Mr. Wm. Benson, recalled, agreed that it would take twelve hours longer to cool the oven from 125 to 100. deg.

Mr. Bernard Moore gave it as his view that it would take more than twelve hours for an oven to cool from 125 to 100 deg. Without artificial methods of cooling, such as clammings, it would take at least twenty-four hours.

Asked what would be the effect on the district if the maximum were fixed at 100 deg., witness replied that 75 per cent. of the potteries would only be able to work four days a week, unless they cared to run the risk of prosecution.

Mr. J. C. Bailey, general manager of the Royal Doulton Potteries, Burslem, said he knew one large firm that would have to stop a third of its production if the standard temperature were reduced as was asked for. The firm in question had gone to considerable expense with the object of artificially cooling ovens. They used clammings and dampers, and also an arrangement for blowing cold air into the ovens, and yet they could not reduce the temperature to less than 125 deg. in the time they could allow for cooling.

Mr. H. J. Johnson, chairman of the Manufacturers' Association, agreed as to the serious effect on the industry that would result in the reduction of the maximum.

Mr. W. Callear (on behalf of the Ovenmen's Society), Mr. A. B. Whitfield (for the Manufacturers' Joint Committee), and Mr. J. Hunter Gray (for the Home Office) then addressed the Commissioner on the subject. Mr. Hunter Gray said the evidence of the doctors went to show that the higher the temperature the worse it was for the worker. No one would dispute that, but the point was whether a temperature could be arrived at consistent with the health of the worker and the manufacturer carrying on his business so as to meet the competition of goods coming from abroad. If Mr. Callear's position were insisted upon, it would mean that his fellow workers would be deprived

of employment. The position of the Home Office was to hold the balance between the manufacturers and the workers.

In the course of some argument with counsel, the Commissioner observed: Everybody's sympathy must be strongly with the men, and the only question I have to consider is whether, on the evidence, it is practicable to reduce the maximum, and whether the Home Office, and those who have advised them, have hit upon——

Mr. Hunter Gray: A happy medium.

The Commissioner: Not a happy one, but the best under the circumstances.

The inquiry regarding the oven temperature question having thus been concluded, the Commissioner's attention was next directed to what was the chief objection of the manufacturers' Joint Committee—namely, the system of self-inspection which it was proposed to impose. On the previous day counsel for the Home Office had been able to announce a settlement on the three other and minor points of objection raised by the manufacturers' Joint Committee —those relating to the employment of young persons in scheduled processes, weight carrying by females, and the cleaning of floors—and now counsel was also able to announce an agreement on what might easily have proved a subject for prolonged contention.

It will be recalled that the Departmental Committee found that to ensure compliance with the new rules it was essential that every department of the factory should be under constant and regular observation, and that to attain such complete supervision it was essential that it should be organised from within the factories themselves. As the alternative to a standing Advisory Board, to which the occupiers were to make periodic reports, the Committee recommended the system of self-inspection provided for by Regulation 27. This, however, was not acceptable to the Manufacturers' Joint Committee, and it was upon this point that negotiations with the Home Office broke down, which resulted in the holding of the inquiry. The rule proposed by the Committee and included in the Draft Regulations was as follows :—

> (a) A person or persons shall be appointed, who shall see to the observance of the Regulations. The names of the persons so appointed shall be recorded in the register.
>
> (b) The persons so appointed shall record in the register once in each week the prescribed details in regard to the prescribed questions concerning the observance of the Regulations.
>
> (c) Copies of the prescribed questions and the weekly entries shall be published each week by affixing them in a prominent place in the factory as well as in the mess-rooms.

There were, naturally, many objections to this system, for some "person or persons" had to be responsible for the happenings over the whole factory, and had to answer questions, the nature of which was not specified, and which could be amended or amplified from time to time. The new Regulation, which was agreed to by all the parties to the inquiry, appears to be much more acceptable, for the supervision will be departmental and not general: there will be no questions to answer, and the entries in the register will be of breaches of the regulations and not compliances. The Regulation No. 27, as amended and accepted by the Commissioner, reads as follows :—

> (a) A person or persons shall be appointed who shall see to the observance, throughout the factory, of the regulations, and whose duty it shall be to carry out systematic inspection of the working of all the regulations in the departments for which they are individually responsible. The names of the persons so appointed shall be recorded in the register.
>
> (b) Each person so appointed shall be a competent person, fully conversant with the meaning and application of the regulations in so far as they concern the departments for which he is reponsible. He shall keep in the factory a book in which he shall record any breach of the regulations, or any failure of the apparatus (fans, &c.), needed for carrying out the provisions, that he may have observed, or that may have been brought to his notice within the preceding twenty-four hours, together with a statement of the steps then taken to remedy such defects or to prevent the recurrence of such breaches. Each entry in such books shall be dated and initialled by the persons appointed. Such book shall be kept in the factory for at least six months after the latest entry therein.
>
> (c) Accurate extracts clearly and legibly expressed shall be made of these entries once a week and signed by the occupier or someone whom he may appoint, and displayed during the following week in a conspicuous place in the departments to which they refer, and copies of all such extracts shall for the same time be displayed in a conspicuous place in the mess-rooms.

In answer to an inquiry by the Commissioner, Mr. Hunter Gray said the original rule specified that certain questions, which were to be prescribed from time to time, should be answered by someone on behalf of each factory. It appeared that these questions in some cases might be difficult to answer, especially where the personal knowledge of the person who was bound to answer them could not be brought to bear, and some of the manufacturers, he gathered, objected to having to state by hearsay what they wanted to know personally. Now it would be upon the manager of each department, or someone appointed, to state the breaches of the regulations and what steps had been taken to put them right.

The Commissioner: So you post up breaches, instead of compliances?

Mr. Hunter Gray: That is so.

This matter having been closed, Mr. Hunter Gray put in an amendment, which had been generally agreed upon, to Regulation 2 (g), and which will now read :—

> A private room shall be provided for all medical examinations. No one shall be present except such other medical man as the surgeon may, with the worker's consent, admit; and, in addition, in the case of a female, any one female relative may be present, or, alternatively, any fellow work-woman in the factory approved by the worker and the surgeon.

The other matters which came before the Commissioner were of sectional interest only, and included the definition of the position of certain coarseware and stoneware potters under the Regulations.

Several objections were lodged by Mr. W. Hassall, on behalf of certain Derbyshire potters. One of them was to the supply of milk or milk-cocoa to lead workers, which is provided for by the rules. He said it would not be hygienic to keep milk overnight in the factory, and fresh milk could not be obtained sufficiently early in the morning. Moreover, he was told that some persons could not take milk or cocoa.

The Commissioner: You have only to provide it. You can lead a horse to the water but you cannot make him drink.

Mr. Burton, in reply to a question, stated that milk had been supplied at his factory for some years without

difficulty; and, further, it was provided that if persons could not take the milk or milk-cocoa, they could be excused on the production of a doctor's certificate.

The Commissioner paid an opportune and well-deserved compliment to the manufacturers for the manner in which they had accepted the new Regulations. First of all, he referred to the investigations of the Departmental Committee, and remarked that a more searching and complete inquiry into the causes and methods of avoiding industrial disease had, he believed, never been held. The outcome was a report dealing with and making recommendations as to every branch of the industry. The Committee did not confine themselves to the dangers incidental to the use of lead, but dealt with the risk arising from dust in every process of manufacture; with temperature, with sanitation, ventilation, and all other conditions which were, or might be, inimical to health in the conduct of the trade. The numerous and drastic proposals were substantially all embodied in the proposed new Regulations. These were submitted to the manufacturers, and, though it could not be denied that they imposed real burdens and serious responsibilities upon them, they had been, in substance, accepted in a friendly —indeed, in a generous—spirit. And he was sure he knew why they had been so accepted. It was because the welfare and the health of their workpeople was to them a matter of real concern, to secure which they were ready to sacrifice much. Some few objections and suggestions were naturally made, which, after a friendly conference, were largely overcome, but at no time did they bear any serious proportion—either in number or importance—to those which were at once readily acquiesced in. Whatever he might think right to advise with reference to the few matters submitted to his arbitration, the fact remained incontestable that the body of these new Rules had been in substance assented to on both sides. It was no news to those who knew the district to hear that employers and employed had worked hand in hand mutually with the authorities to better the conditions of labour. He confessed to a desire that that should be more widely known. He feared there existed in some places, and amongst some persons, the notion that the Potteries was a benighted place, where the people were being poisoned, and where the employers were not sufficiently alive to the risks attending the industry they controlled. The way those Regulations had been received showed that nothing could be further from the truth. The pottery industry was not in itself an unhealthy occupation, although there were certain risks attending it which had been reduced in the past, and which the Committee both hoped and believed would be still further reduced—if they did not entirely disappear—under the proposed new Regulations. In that desire he most sincerely joined. He hoped that one of the first and definite effects of these Rules would be a considerable decrease in the amount of compensation paid in connection with the industry in respect of industrial disease, and that at a time not far removed their full effects might be apparent in raising the standard of the health and happiness of the workers.

The inquiry was then closed. The decisions had not been made public at the time of our going to press.



DELFT WARE.

THE question is frequently asked, "What is Delft?" but the true answer can only be given when the place of manufacture and the date of the particular Delft referred to are given. The ware has been made at Lambeth, Liverpool, Bristol, Wincanton (Somerset), and in Staffordshire, and there are differences in the bodies of all, but there is one general characteristic which is common to all. That is, a close resemblance to porcelain in appearance, but without the qualities which are peculiar to that hard-fired body. Briefly stated, Delft is a porous earthenware body, thickly covered with a white opaque coating of enamel. Being porous, the ware is light in weight, and the tin enamel which is usually employed to cover the brown body forms a good ground for the surface designs which are generally painted on it in blue. The ware was first made in Holland (about the year 1600), and it was given the name of its town of origin—Delft. It is a subject of great interest to all students of ceramics, and we acknowledge the courtesy of a correspondent who sends us an abbreviated account of an instructive lecture dealing with it delivered at Edinburgh, on Dec. 18. Mr. Ward gave a demonstration in the Royal Scottish Museum on

"Delft Ware, Its Manufacture and History."

Mr. Ward, in tracing the history of Delft ware from the beginning of the seventeenth to the end of the eighteenth century, said: "There was evidence of its early source in the wall of coloured tiles from the Palace of Darius, which was set up in the Museum, and on which figures of the Royal archers were produced in the sixth century B.C. by exactly the same methods and with the same materials as those adopted long afterwards by the potters of mediæval Persia, of Rhodes and of Damascus, and still later found at Delft. Before reaching Holland the same ware appeared in what we now call the Hispano-Moresque pottery of Spain, which again in Majorca took the place-name, and appears in Italy as Majolica. A like change follows when it becomes a flourishing industry at Nevers in France, and again when it reaches Holland and takes its name from Delft. All through it is practically the same ware—a body of rather coarse earthenware over which is spread a skin of white tin oxide to receive and throw out clearly the design or subject painted on it, and when fired presents a creamy surface. The reasons why this industry settled and prospered in Delft in the seventeenth and eighteenth centuries were to be found in the great prosperity and enterprise of the Dutch people, and many of the pictures on the delft ware found their their subjects on incidents connected with their East Indian trade in spices, tea, and tobacco. By a number of slides, some of them in colours, the rise, expansion, and decline of the making of Delft ware were illustrated. One of the polychrome examples from the Museum collection, shown in natural colours, was specially interesting from the fact that on the bottom, beside the maker's initials, the original price had been written on before it went to the kiln. The price was 7 stuyvers, or 7d. of our money. This vase was bought by the Museum about thirty years ago for over £17. To-day it would easily fetch four times that sum."

Gauge Glasses produced by a process of blowing and drawing are dutiable at 60 per cent. ad val. as "articles of every description . . . composed wholly or in chief value of glass, blown either in a mould or otherwise," on importation into the United States, according to a recent tariff decision.

IRISH POTTERY.

WE have been favoured by Arthur Deane, Esq., Curator of the Public Art Gallery and Museum at Belfast, with a detailed list of the examples of pottery, glass, and other interesting curios presented to the Museum by Miss L'Estrange. The collection is an important acquisition from every point of view, and the appreciation with which it has been received will, it is hoped, be an incentive to other possessors of collections of works of art to make the public acquainted with them by presenting them to some local or national institution. There should not be any selfishness in connection with Art, and the real value of art treasures is enhanced and not diminished when the enjoyment of them is shared by the public. Additional interest attaches to the gift to the Belfast Museum, inasmuch as it throws light on Irish industries of the past—particularly on the manufacture of pottery and glass.

Miss Jane Frances L'Estrange, as a resident in Belfast, would have especial pleasure in the few undoubted native productions that are included with the fine collection of Chinese, Oriental, Japanese, Wedgwood, Chelsea, Crown-Derby, Spode, Worcester, and other pottery. Amongst these are two jelly moulds impressed with a cray-fish, and four sauce boats in the shape of a leaf. These are in cream ware, and it is believed they were made in Ballymacarrett, Belfast, about 1791-99, by Thomas Greg, S. M. Stephenson, and James Ashmore. The body is a fine hard texture, but is not what we now understand as china. Jarrett, in his "Ceramic Art of Great Britain," states that on Jan. 29, 1793, the Earl of Hillsborough presented a petition from them to the Irish House of Commons in which they say that

> "Recognising the great advantages arising from the manufacture of Queens Ware and other kinds of fine wares such as are made in Staffordshire, they had united themselves into a company for producing such wares in Ireland, and by their exertions had carried this manufacture to a greater perfection in the county of Down, near Belfast, than was ever known in the kingdom: that they had been at great expense in erecting buildings and importing machinery and in bringing workmen from foreign places: that the difference in the prices of coal between Belfast and Staffordshire had greatly exceeded their expectations, and they now prayed for pecuniary aid. A Committee was immediately appointed by the House to report on the petition, and on the 2nd February they reported that the petitioners had fully proved their allegations. The report was ordered to be laid on the table, but it does not appear that anything further was done in the matter."

There is also a butter pot and cover in brown glazed earthenware, unmarked, probably made at Castle Espie, Comber, County Down. Amongst the examples of Wedgwood ware are two teapots, which are of great local interest, and very properly find a place in an Irish museum along with Irish pottery, although they are not of Irish manufacture. They are both in cream ware, marked "Wedgwood," impressed, and were printed at Liverpool. One of them has a panel inscribed, "Success to the Independent Volunteer Societies of the Kingdom of Ireland," supported on each side by an armed Volunteer in the uniform of the 1st Battalion of Belfast. Below is the inscription, "For my Country," and the panel is surmounted by the figure of Hibernia, seated, playing on a harp. The printed design on the other, and larger, teapot is a view of a country market, with goods exposed for sale in wagons decorated by flags flying, and in the foreground there are figures of a man and a woman bartering. Above is the inscription, "Martha M'Cleland," the name of a well-known Belfast lady, born in the year 1758, who was married in 1780 to a merchant of Belfast.

The collection includes examples of Chinese, Oriental, Chelsea, and Worcester of late eighteenth century, with Staffordshire and other pottery of later dates. There are also examples of Cork, Waterford, and English glass, but space necessitates the limitation of this notice to Irish Pottery. Specimens of pottery made in Ireland, and especially in Belfast, will be appreciated by the Museum authorities, and possessors of authenticated pieces are invited to lend them for exhibition in the Museum, if they are not yet disposed to present them unconditionally.

Legal.

Trustee's Accounts in Default.—An application was made on Nov. 25 to Mr. Justice Phillimore, sitting as Bankruptcy Judge, in the King's Bench Division, arising out of the execution of a deed of arrangement, dated March 24, 1911, between Florence Beagle, glass, china and hardware merchant, of Oakwood-parade, Roundhay, Leeds, and her creditors. Mr. Hansell, appearing for the Board of Trade, stated that the trustee under the deed (Mr. J. W. Senior, chartered accountant, of Leeds) had omitted to lodge with the Board an account of his receipts and payments as trustee between March 24, 1911, and Dec. 31, 1911. An order was made upon him on March 5, 1912, requesting him to furnish the Board with the required accounts, but there had been no compliance with it. His Lordship ordered the accounts to be filed within four days, the respondent to pay the costs of the application.

Mineral Water Bottle Disputes.—An action brought by L. Clegg & Sons, mineral water manufacturers, of Gateshead, Sunderland, and Tyne Dock, against Joseph Wilkinson, mineral water manufacturer, Gateshead, and his trustee, J. W. Armstrong, of Collingwood-street, Newcastle, was concluded by his Honour Judge Greenwell, at the Newcastle County Court, on Nov. 27. Plaintiff alleged that the defendant Wilkinson had wrongfully caused his carmen to collect Messrs. Clegg's mineral water bottles and boxes, and that large quantities of these bottles had been deliberately broken, through the express instructions of Wilkinson, on Wilkinson's premises. After hearing evidence his Honour said he thought Clegg & Sons were justified in raising the case, but they must not expect to succeed unless they proved beyond doubt that that evidence was true. He had come to the conclusion that Messrs. Clegg had not made out their case with regard to the destruction of the bottles and his Honour thought he was justified in going further, and saying that in his mind, Mr. Wilkinson was entirely absolved from the charges made against him. The result must be, substantially, a judgment for the defendants from the time of the payment into court, and judgment would be entered for the defendants, with costs, upon the payment to the plaintiffs of the £5 in court.——On Dec. 3 the case of Clegg v. Venus, which was an application by the plaintiff to restrain the defendant from dealing with plaintiff's bottles, was mentioned at Gateshead County Court before the same Judge. Venus is a dealer in broken glass bottles. Mr. Crute appeared for the plaintiff and applied for an adjournment on the ground that the plaintiff had been ill for some time, and had been ordered by the doctor to take a complete rest. Other witnesses also being absent his Honour pointed out that if he granted an adjournment it would throw the court into confusion and a very bad precedent would be created. His Honour therefore non-suited the plaintiff, and struck the case out.

Forwarding Agents' Dispute.—In the City of London Court, on Dec. 5, before his Honour Judge Lumley Smith, K.C., Davies Turner & Co., Ltd., forwarding agents, 52, Lime-street, E.C., claimed £3 12s. 6d. against L. Lumley & Co., Ltd., America-square, for the carriage of glass goods. Mr. Grain, plaintiffs' representative, said the claim was made up of two items, 7s. 6d. and £3 5s. The 7s. 6d. was for the cartage and agency on two cases of glass goods which came from Philadelphia which the plaintiffs superintended from Nine Elms Station to the defendants' address at America-square. The defendants had got to know that the plaintiffs only paid 4s. to the London & South-Western Railway for the cartage, and they did not wish to pay the plaintiffs for their own trouble in the matter. The £3 5s. represented freight and charges on two cases of glass goods from Philadelphia shipped via New York. The charges were £3 2s. 6d. as far as the London station and the plaintiffs had put on 2s. 6d. for their agency charges. They gave the defendants the delivery order. Mr. Collins, defendants' solicitor, said the plaintiffs had no legal claim against the defendants at all. The defendants had never instructed the plaintiffs to act for them. If the plaintiffs had chosen to retain the goods, then the defendants would have had to pay to release them. It was for the plaintiffs to show that they had any authority from the defendants to do the work sued for. The defendants bought the goods in New York on the terms that they should be delivered to their warehouse free and the people of whom the defendants bought employed the plaintiffs in Philadelphia to ship the goods. Had the charges been right, the defendants would have paid what they thought was right. Mr. Grain said the plaintiffs received instructions from their Philadelphia house to convey the goods to the defendants, and they were instructed to collect the charges and not to deliver the goods until they had the money. They handed the defendants the delivery order giving them credit for the mere accommodation only, as they had a ledger account with the defendants. In those circumstances they never made a practice of demanding the moneys on delivery. Judge Lumley Smith said it seemed to him that the defendants were liable to pay the freight. Mr. Collins said that might probably be so as between themselves and Messrs. Forbes, in Philadelphia, who had sent them the goods. The plaintiffs were merely the agents for Messrs. Forbes. Judge Lumley Smith said that was not business. Messrs. Forbes seemed to have told the plaintiffs to collect the charges. The plaintiffs should have held the goods until they got their money. It seemed to him that there was an implied contract on the plaintiffs giving up the goods that the defendants would pay the charges. He thought the plaintiffs were entitled to be paid, and the defendants must settle the matter with Messrs. Forbes. Mr. Collins said then he would dispute the amount of the charges. Plaintiffs had charged £2 4s. for the ocean freight whereas it should be £1 2s. That was all the plaintiffs had paid. Mr. Grain said the ocean charges were £2 4s. Judge Lumley Smith gave judgment for the plaintiffs for £2 8s. and costs.

Sequel to Purchase of "Resist."—(From our Potteries Correspondent.)—An action having reference to the "resist" used in gold printing was heard at the Hanley County Court by Judge Ruegg, K.C., on Dec. 19. The plaintiff, Harry Hobson, potter's printer, of Dresden, sought to recover £100 damages from Harry Davies, managing director of Thomas Morris, Ltd., Regent Works, Mount Pleasant, Longton, on the grounds of assault, trespass and false imprisonment. The plaintiff's case was that he had been a potter's printer for 20 years, and prior to 1909 was employed by the firm of which defendant was managing director. This firm did gold printing, that work being in charge of a man named George Clowes. When plaintiff left Thomas Morris, Ltd., he went to work at Aynsley & Co.'s works at Longton. Until then he had not done gold printing, but being asked if he would do it, he agreed, knowing that he could obtain the necessary "resist," for which at that time he himself had no recipe. This "resist," said plaintiff's counsel, was compounded of cheap and ordinary materials, but the mixing was a valuable secret. Accordingly plaintiff, in December, 1910, met Clowes, who did the gold printing for Thomas Morris, Ltd., and who owned the "resist" recipe, and asked if he would supply him (plaintiff) with some "resist." Clowes consented and supplied him with a cupful for a shilling. Six months afterwards he obtained some more "resist" from Clowes for 1s. 6d. Subsequently he was able, as the result of his own experiments, to compound his own "resist." On May 31 last the defendant telephoned to plaintiff, saying he wanted to see him. He promised to go, but the cashier stopped him, saying they were too busy. Later plaintiff received a letter, as a result of which he went to Messrs. Morris' factory and saw the defendant in the office. Defendant said, according to plaintiff's evidence, "I charge you with stealing two cups of 'resist' off these works." Plaintiff replied that he had not stolen any. Heated conversation followed, and defendant got up, locked the door of the office, took the key out of the lock and put it in his pocket. Defendant later telephoned for a policeman, and when the officer arrived, defendant went and let him into the office. The constable was in plain clothes, and on his informing the defendant that he was a policeman, the defendant said: "I charge this man Hobson with stealing two cups of 'resist' on these works." The plaintiff repeated that he had had no "resist" off the works, and that the only "resist" he had had was from Clowes, whom he had paid for it. Defendant added that there were several other cases, but he was only going on with one. He had been, he said, told about it by a Mrs. Turner, one of his employees. Eventually the officer said to the plaintiff: "You will have to go down to the office with me." Plaintiff accompanied him and was in the charge room three-quarters of an hour. When the police superintendent was informed, however, he said he would have nothing to do with it, and that if Mr. Davies wished to do anything he must proceed by warrant. Plaintiff then left the office. For the defence a Mrs. Turner employed by Messrs. Morris, said she made the "resist" which was a secret manufacture of her own. When she was not at work her room was kept locked up. She spoke to seeing the plaintiff, who asked her to give him some of her "resist." She refused. Defendant gave evidence. He denied that Hobson was locked in his office. The lock of the door was on the outside, and was an American patent which would not lock from the inside. The door was opened from the inside by the turning of a knob. Asked why he sent for a policeman, defendant said it was because plaintiff began to use bad language. He said to the policeman: "Officer, Hobson has made a statement to me that he has had two cups of 'resist' from here, and he says he paid 1s. for one and 1s. 6d. for the other. No doubt Hobson is prepared to make a statement to you to the same effect." Hobson then repeated the statement. The Judge: Do you say they were stolen from you? Witness: I don't. The Judge: The policeman says you did? Witness: I had no intention to proceed. The Judge: Well, what did you send for the policeman for? Witness: To stop this "resist" going. The Judge: Do you think now that he took it? Witness: No. In giving judgment, his Honour said he was satisfied defendant gave the plaintiff in charge. There was

imprisonment by keeping him in the room and afterwards by handing him over to the custody of the policeman. He gave judgment for the plaintiff for ten guineas damages, with costs.

Floating a Glass Bottle Company.—In the Lord Mayor's Court on Dec. 20 and 23, before the Recorder (Sir Forrest Fulton, K.C.) and a jury, Nunn, Popham & Starkie, solicitors, of 140, Leadenhall-street, E.C., made a claim against Mr. Lambton le Breton Mount, who was said to be interested in certain patents for the manufacture of glass, and residing at Lauderdale-mansions, Maida-vale, W., to recover the sum of £25 11s. 2d. for professional services rendered. Mr. H. L. Tebbs was counsel for the plaintiffs, while the defendant was represented by Mr. Arthur May. It was stated that on July 16 last the defendant called upon the plaintiffs, and said that he was the owner of some glass patents. He desired a company to be formed to purchase these patents, and produced a draft prospectus. The plaintiffs advised him that the prospectus was not satisfactory. The defendant said that a site had been acquired on the Thames for the erection of a factory. Subsequently the defendant brought Sir George Kekewich and others to the plaintiffs' offices. Sir George Kekewich was to be one of the directors of the company. The plaintiffs were informed that the proposed company was to be promoted by a Mr. Taunt, a company promoter, who possessed a company known as the Canadian General Investment Co. The company was to have a capital of £100,000, and the defendant was to sell his patents for £33,000, of which £25,000 was to be payable in shares in the concern. In return for promoting the company the Canadian General Investment Co. was to receive a sum of £6,000 in cash, and was also to promote underwriting for £40,000 at a remuneration of 10 per cent. Acting on the defendant's instruction, Mr. Nunn framed the prospectus for the company, which was to be known as the Automatic Glass Works Co., Ltd. Matters dragged on, and by Sept. 16 nothing had been done in regard to the underwriting of the shares in the company. The defendant then confided to Mr. Nunn that he was getting uneasy about his position with Mr. Taunt, as the latter was unable to get any of the underwriting done. The defendant inquired who had to pay the plaintiffs' charges, and was told that he was liable. He replied that he would not pay, and the plaintiffs refused to advise him further. In his evidence Mr. Nunn said that after he had prepared the prospectus the defendant informed him that he had agreed to pay Mr. Taunt a sum in excess of that mentioned. Mr. Taunt was to receive an extra £6,000, and a clergyman named Mr. Patterson was to be paid £1,500. The Recorder: Those payments ought to have been mentioned in the prospectus. Mr. Nunn: They should have been. In cross-examination Mr. Nunn said that on one occasion the defendant was accompanied by two gentlemen connected with another promotion company, the British and Foreign Investment Corporation, of 2, Broad-street Place, E.C. He had since heard it stated that the defendant came to him to get underwriting done in connection with the company. That statement was quite untrue, as he never undertook to do any underwriting. He was not told that if he procured the underwriting for the company he would be appointed the solicitor to the concern. Some suggestion was made that the plaintiffs might help in procuring underwriting, but the witness said that he would not have anything to do with that matter. For the defence it was said that a prospectus was framed before the plaintiffs were approached. The company had been formed by Messrs. Oxley and Saunders, two gentlemen who were associated with the British and Foreign Investment Corporation. The defendant, in company with Messrs. Saunders and Oxley, called upon the plaintiffs for the sole purpose of getting Mr. Nunn to procure underwriting. Subsequently the Canadian Investment Corporation became interested in the patents, and they agreed to form a company to work them. Mr. Nunn was retained to bring out the company by the Canadian Investment Corporation. The arrangement was that if the company was brought out the plaintiffs should receive £250, while if it fell through they would get nothing. In addition, Mr. Nunn agreed to find underwriting for £25,000 in the Automatic Glass Works Co., Ltd. The plaintiffs were to be paid £250 by the promoters if the company went through. It had not gone through, and therefore, as they could not get anything out of the promoters, they were suing the defendant, who never gave them any instructions. Sir George Kekewich, of St. Albans, Feltham, who described himself as a retired public servant, said he was approached by Mr. Taunt with a view to his becoming a director of the proposed company. There was a meeting at the plaintiffs' offices, when the prospectus of the company was discussed. Those matters took place a long time ago, and he attached no importance to the interview, and his recollection did not serve him as to details. Witness understood that Taunt was the promoter of the company, and that he was to underwrite the company. Either at that time or some other stage mention was made of a sum of £250 to be paid by Mr. Taunt to Mr. Nunn for the formation of the company. Mr. Mount gave no instructions to Mr. Nunn at the meeting. There were a good many instructions given to Mr. Nunn by all the people present, but Mr. Taunt certainly took the lead in giving instructions to Mr. Nunn. In his evidence the defendant said he had 40 years' experience of the glass bottle manufacturing trade. That experience was obtained in Australia. Early in the present year he had patents he desired to sell to a company. One of the patents was of his own invention, and related to the making of glass; and the other patent which he had acquired was connected with the making of bottles. He came across the two directors of the British and Foreign Investment Corporation. a promoting company. On July 16 he went to the plaintiffs' office with one of the directors. The promotion was not going on rapidly, although a prospectus had been drawn up. The conversation at the plaintiffs' office was purely about underwriting, but he took no part in the conversation. Mr. Nunn was to see if he could get any underwriting done. The witness never had a solicitor acting for him in connection with the promotions. He did not retain Mr. Nunn as his solicitor. The promotion was not carried through by the British and Foreign Investment Corporation, and he then got into touch with Mr. Taunt, of the Canadian General Investment Co. Mr. Taunt told him that £250 would be about the sum necessary to pay for solicitors' expenses to carry through the promotion of the company. The witness declared that he had told Mr. Nunn that it was to be clearly understood that he was to be in no way responsible or liable for the legal expenses of the promotion of the company. Mr. George Taunt, manager of the Canadian General Investment Co., Ltd., of Dashwood House, E.C., was called on behalf of the defendant, and said that it was always understood that Mr. Nunn should procure underwriting for the proposed company. It was, witness said, the general practice with solicitors who acted for companies that were being formed not to be paid unless the company went to allotment. He expressed the opinion that it was not necessary that private commission letters in connection with the introduction of business should appear in a prospectus. The plaintiffs had held the proposed company up for two months, but the matter was now proceeding, and he had the nicest board of directors that could be found. The jury found a verdict for the plaintiffs, and judgment was entered accordingly with costs, subject to taxation.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR NOVEMBER, 1912.

		Quantities.				Value.			
		Month ended November 30.		Eleven Months ended November 30.		Month ended November 30.		Eleven Months ended November 30.	
China or Porcelain, Earthenware and Pottery:		1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.
To Germany	cwts.	6,072	4,124	55,568	49,727	£8,834	£7,604	£73,836	£66,088
,, France	,,	7,425	9,087	89,232	76,325	8,222	10,679	78,696	91,056
,, United States of America	,,	18,974	25,216	275,468	248,678	31,471	41,790	399,550	374,469
,, Brazil	,,	31,119	31,227	290,794	360,345	18,754	17,699	194,052	201,850
,, Argentine Republic	,,	34,463	34,308	436,421	337,277	24,071	21,261	253,530	238,883
,, British South Africa	,,	13,697	13,700	131,997	119,341	16,658	15,560	120,381	121,904
,, British East Indies	,,	41,216	35,122	353,239	350,394	25,546	19,789	209,490	208,774
,, Australia	,,	31,981	21,756	245,272	239,111	34,201	25,377	281,899	289,544
,, New Zealand	,,	9,821	7,383	82,862	87,087	15,066	11,495	113,590	118,072
,, Canada	,,	44,652	72,596	500,411	578,935	37,586	49,738	369,687	435,076
,, Other Countries	,,	104,513	121,986	1,238,561	1,051,396	72,760	81,450	685,761	721,375
Made up as follows:									
Porcelain, Chinaware, and Parian	,,	2,020	2,072	15,804	16,252	20,960	21,610	158,666	157,999
Floor Tiles for Tesselated Pavement	,,	8,066	6,938	85,397	70,783	7,755	6,259	77,685	67,634
All other Tiles (except Roofing and Street Paving)	,,	13,779	18,471	119,242	148,255	12,586	14,468	106,204	141,988
Sanitary Ware	,,	37,013	36,264	329,909	340,788	45,062	51,692	422,785	481,330
Electrical Ware, Door Fittings, and Chemical Ware	,,	5,313	4,825	56,814	42,794	4,587	4,045	47,244	40,464
Other Earthenware (including Semi-Porcelain and Majolica)	,,	128,251	127,821	1,276,992	1,275,006	175,848	171,529	1,674,527	1,689,914
Jet, Rock'm, and Glazed Terra-cotta	,,	231	1,311	4,574	8,240	604	1,571	5,955	7,842
Red, Stone, Brown and Yellow Ware	,,	149,260	178,803	1,811,093	1,596,498	25,767	31,268	287,406	279,920
Glass.									
To British South Africa	value £	—	—	—	—	13,576	15,043	92,810	106,575
,, Other Countries	,,	—	—	—	—	153,929	149,495	1,443,915	1,557,795
Made up as follows:									
Plate Glass	cwts.	18,708	20,334	195,107	208,461	32,469	34,789	328,724	357,403
Flint Glass	,,	8,317	8,049	76,040	80,135	28,330	31,261	245,779	271,954
Glass Bottles	gross	98,985	89,772	866,464	942,669	64,763	56,649	544,972	588,252
Glass Manufactures, other sorts	cwts.	58,798	53,224	568,247	599,329	41,943	41,839	417,250	446,761

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR NOVEMBER.

Porcelain, Chinaware, and Parian	cwts.	3,467	3,019	50,912	39,443	19,173	15,487	252,350	193,698
Floor Tiles for Tesselated Pavement	,,	1	9	1,083	524	2	18	928	611
All other Tiles (except Roofing and Street Paving)	,,	4,273	3,363	50,065	28,385	2,409	1,757	22,322	17,552
Sanitary Ware	,,	1	10	231	307	2	48	327	655
Electrical Ware, Door Fittings and Chemical Ware	,,	1,844	2,461	20,477	25,530	3,168	3,818	35,409	39,584
Other Earthenware (including Semi-Porcelain and Majolica)	,,	30,124	34,785	285,393	300,367	60,339	68,699	555,013	601,064
Jet, Rock'm, and Glazed Terra-cotta	,,	1	42	210	351	13	105	478	1,019
Red, Stone, Brown and Yellow Ware	,,	33,676	11,786	272,946	211,124	4,778	2,124	46,420	46,713
Window and German Sheet Glass	,,	104,293	132,470	1,088,367	1,205,059	57,945	73,413	623,616	693,216
Plate Glass	,,	25,853	28,985	307,209	313,930	33,286	35,458	382,516	391,127
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	,,	84,757	83,755	763,658	797,028	127,429	129,565	1,136,650	1,192,646
Glass Bottles	gross	143,771	150,417	1,416,672	1,565,784	60,473	67,936	606,739	679,668
Glass Manufactures, unenumerated	cwts.	894	1,027	5,955	15,795	818	1,605	7,318	14,957

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR NOVEMBER.

Porcelain, Chinaware, and Parian	cwts.	1,207	292	23,667	12,334	7,229	2,107	118,659	65,960
Of all Other Sorts	,,	484	693	9,341	8,320	1,172	1,496	14,408	12,764
Window and German Sheet Glass	,,	200	669	8,800	9,966	180	532	4,797	5,981
Plate Glass	,,	205	199	2,013	4,625	307	244	2,635	6,841
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	,,	1,314	907	11,496	11,492	3,512	2,611	30,960	31,280
Glass Bottles	gross	5,225	3,482	38,202	38,730	3,101	2,027	21,458	20,601
Glass Manufactures, unenumerated	cwts.	81	2	808	1,430	55	5	725	1,524

EARTHENWARE EXPORTS TO THE UNITED STATES.

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Oct. 27, 1912, to Nov. 27. Packages.	Corresponding Period, 1911. Packages.	Exports Jan. 1 to Nov. 27. Packages.	Corresponding Period, 1911. Packages.
Boston	660	369	6,213	7,048
New York	1,125	799	9,217	7,343
Baltimore	918	505	7,860	10,141
Philadelphia	213	205	2,708	3,973
New Orleans	162	53	1,073	857
Newport News ...	15	1	69	153
San Francisco ...	122	149	1,362	685
Portland, Maine.	54	23	713	579
Galveston	46	28	578	921
Portland, Oregon	56	7	372	80
Inland Points ...	177	42	778	1,109
Total	3,548	2,181	30,943	32,889

THE UNITED STATES GLASS-SAND INDUSTRY.

THE consumption of glass sand has been rapidly increasing for many years, and a report by the U.S. Geological Survey, just received, states that it is probable that it will continue to increase indefinitely. Vast resources of the material are in sight. The uses for glass are now so varied and extensive that it may well be classed with iron and cement in its importance as a structural material. Glass sand in situ possesses relatively little intrinsic value. The market value is due to the labour, cost of extraction, and preparation.

The factors on which a deposit of sand depends for its possible value for making glass are (1) chemical purity, (2) physical character, (3) quantity available, (4) location with respect to fuel supplies, (5) conditions of quarrying or mining, (6) location with respect to transportation routes, and (7) location with respect to markets.

A deposit so thin as 20 ft. should have an areal extent of at least 20 acres of good sand in sight to warrant the erection of a mill and trackage. Most deposits are thicker than 20 ft., but it would be safer to have a much higher ratio between areal extent and thickness than the minimum given. Where ledges of sand require stripping of overlying limestone, the limestone may in certain cases be of such purity that it also could be used for glass making. If this is not the case, other uses should be sought for it as a by-product. In regard to fuel, every plant turning out glass sand in quantity sufficient to net a profit must be equipped with power for moving the sand and drying it, and in most cases with equipment for cleaning it as well. The margin of profit is at present so low that the cost of preparation cannot reasonably stand freight charges on coal for more than 50 miles. Natural gas would be a suitable fuel, especially in the operation of rotary driers. In respect to transportation routes, the general principle "the more available the better" is applicable. Aside from the necessity of securing fair and uniform freight rates experience has shown, especially where the dependence is on only one railroad for transportation, that shortness of cars at certain seasons may seriously handicap a plant in its shipments, and lead to cancellation of many orders. In respect to markets, it must be considered that sand is for its value, one of the bulkiest products, and therefore one whose cost to the consumer is greatly influenced by distance. At the same time the question of permanence of these markets must be considered.

Some of the large sand properties, together with their mills, represent an outlay of $75,000 to $100,000, a sum that requires good business judgment for its investment and subsequent careful management in order to keep it paying adequate interest. Strong competition in the Middle States has forced prices down very low at present, and competition in the form of the small producer who leases a sand bank and works out by hand and steam all the choice sand within convenient distance and then abandons the quarry, having figured only daily wages to himself as profits, has resulted in some embarrassment to the larger companies.

The following table gives the total production of glass sand in the United States in each of the last ten years :—

QUANTITY AND VALUE OF GLASS SAND PRODUCED IN THE UNITED STATES 1902-1911, IN SHORT TONS.

Years.	Glass Sand. Quantity.	Glass Sand. Value.
1902	943,135	$807,797
1903	823,044	855,828
1904	858,719	796,492
1905	1,060,334	1,107,730
1906	1,089,430	1,208,788
1907	1,187,296	1,250,067
1908	1,093,553	1,134,599
1909	1,104,000	1,163,375
1910	1,461,089	1,516,711
1911	1,538,666	1,543,733

THE REQUIREMENTS OF SAND FOR MAKING GLASS.—The United States Geological Survey has received so many requests for information concerning glass sand that the stock for free distribution of the principal special bulletin on this subject, Bulletin 285, has been exhausted. It has therefore been decided to republish the essential facts given in that publication and in Bulletin 315. The points here considered are intended mainly to serve as a guide to persons who wish to know whether certain sandstones may be suitable for glass-making. Glass is a fused mixture of the silicates of alkalies, alkaline earths, and of more common metals. Usually the alkaline bases are sodium and potassium, the alkaline earth is calcium, and the common metallic element is lead. All of these are used in the form of salts. In melting together the various ingredients employed in the batch or mixture it appears that silica under the influence of heat in the presence of a flux forms silicates with sodium or potassium, and calcium, lead, &c., and the alkaline silicate then dissolves the remaining silicates. It is this solution that solidifies into glass on cooling. Glass may be divided into four general classes —plate, window, green bottle, and flint. Owing to manufacturing conditions, few makers follow the same formula, but the following table shows the general proportion by weight which sand bears to the other ingredients commonly used in certain types of American-made glass :—

GENERAL PROPORTIONS, BY WEIGHT, OF VARIOUS COMPONENTS OF GLASS.

Component.	Plate Glass.	Window Glass.	Green Bottle.	Lead Flint.	Lime Flint.
Sand (SiO_2)	100	100	100	100	100
Salt cake ((Na_2SO_4)	—	42	38	—	—
Soda ash (Na_2CO_3).....	36	—	—	—	36
Limestone ($CaCo_3$)	24	40	34	—	
Carbon (C).....	·75	6	5	—	
Arsenic (As_2O_3).....	1	2	—	·15	·02
Slaked lime ($Ca(OH)_2$)	—	—	—	—	12
Potash (K_3CO_3)	—	—	—	34	—
Red lead ($2PbO + PbO_2$).....	—	—	—	48	
Nitre ($NaNO_2$).....	—	—	—	6	1
Manganese (MnO_2)	—	—	—	·06	6·66
Antimony (Sb).....	—	—	—	·02	·23

Requirements of Glass Sand.—Sand is therefore the major constituent of glass, constituting from 52 to 65 per cent. of the mass of the original mixture, or from 60 to 75 per cent. of the finished product after melting has driven off carbon dioxide, sulphur dioxide, and other volatile materials. To the sand is due the absence of colour (according to its purity), the transparency, brilliancy, and hardness of glass. In other words, the quality of the glass depends largely on the quality of the sand. For the finest flint ware, such as that used for optical and cut glass, "water whiteness," absolute transparency, great brilliance, and uniform density are required, and only the purest sand can be employed, since slight impurities, especially small quantities of iron, tend to destroy these effects. For plate and window glass, which are commonly pale green, absolute purity is not so essential, but generally the sand should not carry more than 0·2 per cent. of ferric oxide. Green and amber glass for bottles, jars, and rough structural work can be made from sand relatively high in impurities. An excess of the chief impurity, iron, is usually avoided in the quarries by a careful selection of the whitest sand, although the whitest sand is not invariably the purest. Repeated washing tends to remove the iron. Magnetic separators also have been resorted to, especially when the iron is present in the form of magnetite. Clay materials are objectionable, because they cloud the glass. Washing helps to remove them, since they occur usually in a very finely divided state. Magnesia, which is more apt to be introduced into glass materials through limestone than through sand, is troublesome because it renders the batch less fusible. If the sand is derived from indurated sandstone the latter should be friable or easily crushed. In examining sand in order to ascertain its value for glass-making inspection with a magnifying glass is the best preliminary test. The following points should be observed: The sand should be nearly white in colour; it should be of medium fineness (passing a 20 to 50 mesh horizontal sieve); the grains should be uniform in size, even, and angular, or, less preferably, they may be rounded. A simple chemical test may be employed by heating the sand in a dilute acid. Effervescence indicates the presence of lime; loss of colour shows the presence of clay impurities. Iron in the most minute quantity may be detected by dissolving sand in hydrofluoric acid and adding potassium ferrocyanide, which produces a blue precipitate if iron is present. Complete quantitative analyses as well as a furnace test should be made as a final determination of the character of a prospective glass sand. The impression has long prevailed, especially among writers on the subject of glass making, that round-grained sands are at a decided disadvantage in comparison with the sharp, angular variety. Practice seems to disagree with this idea, at least in the case of the Mississippi Valley plants, where smooth, rounded sand is successfully used for all ordinary varieties of glass and for some fine flint ware. As a rule, no very close check is kept on materials by manufacturers of the ordinary commercial grades of glass. Results are watched with care, however, and experience with certain materials usually determines their use or rejection. Sand uniformily finer than one-sixtieth inch is said to "burn out" in the batch and not to produce as much glass per unit of weight as does coarser sand. In a mixture of coarse and fine sand the finer sand is liable to settle to the bottom of the batch, thus preventing an even mixture of the materials and producing in consequence a glass uneven in texture;



Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c.; also marked local newspapers.

The City and Guilds of London Institute.—The report of the Department of Technology for the session 1911-12 shows that, unfortunately, no classes were available for Pottery and Porcelain or Glass-making. In the preceding session three pottery classes with 59 students, and one glass-making class with two students were held.

British Clay Exports during the month of November were as follows:—China clay, 43,872 tons (£51,998); fireclay, 6,993 tons (£5,501); other sorts, 6,592 tons (£6,096). Exports for the corresponding period of 1911 were:—China clay, 54,760 tons (£59,552); fireclay, 5,587 tons (£3,641); other sorts, 1,739 tons (£1,713).

Fires.—On Dec. 16 a fire broke out at Boulton & Co.'s Midland Tileries, Longport. A long shed, used as a storeroom for tiles and moulds, was gutted. The damage ise stimated at £1,000.——The lock-up shop of Mr. Baddell, Rhiwderin, near Newport, Mon., was found to have been on fire during the night of Dec. 18. Practically the whole of the china stock had been destroyed.

Diaries, Calendars, &c.—We have received and acknowledge with thanks: A clearly printed tear-off wall calendar, one month to the page, from Mr. Warwick Savage, Burslem; a dainty illustrated calendar from Mr. John Porter, 13, Charterhouse-street, E.C.; the Sprechsaal Kalendar 1913, a compendium of German glass trade information, from the publishers of "Sprechsaal"; a wall calendar with appropriate coloured illustration, "Waiting at the Fountain," from the Roessler & Hasslacher Chemical Co., 100, William-street, New York City, U.S.A.

The Benevolent Institution.—The annual general meeting of the Pottery and Glass Trades Benevolent Institution will be held on Tuesday evening, Jan. 28, at the First Avenue Hotel, Holborn, London, E.C., at eight o'clock. The board of management for the ensuing year will be elected at the coming meeting. Members desiring to nominate any other member for a seat on the board must apply to the secretary for the proper form. All nominations must reach the secretary not later than Jan. 14. Nominations received after that date will be void.

Death of a Ceramic Artist.—Mr. Mark V. Marshall, one of the well-known artists at the Lambeth studios of Doulton & Co., died on Dec. 9. He had been with them for many years, and no exhibition of their characteristic Doulton ware was complete without some specimens of his ingenious and decorative work. For all his etched and modelled work he used as mark the incised letters M.V.M. He was buried at Streatham Cemetery, and among those present at the funeral were his old friend Mr. Wallace Martin and several of his associates at Lambeth.

Lead Poisoning.—The total number of cases of lead poisoning reported to the Home Office during November, 1912, was 51, 4 of which were fatal. In addition, 23 cases of lead poisoning (5 of which were fatal) were reported among house painters and plumbers. In the eleven months ending December, 1912, there were 520 cases of lead poisoning and 38 deaths reported under the Factory and Workshop Act, as compared with 606 reported cases and 33 deaths in the same eleven months of 1911. In addition, there were 234 cases of lead poisoning (including 42 deaths) among house painters and plumbers during the first eleven months of 1912, as compared with 242

cases (including 41 deaths) in the corresponding period of 1911. Of the 51 reported cases of lead poisoning in November, 1912, 7 were in the china and earthenware trades, none of which were fatal. In the eleven months ending November, 1912, there were 69 reported cases and 13 deaths in our industries, as compared with 86 cases and 6 deaths in the same period of 1911.

The Christmas Trade.—One of our representatives visited some of the busy shopping districts in London and the suburbs on the day and evening before Christmas. In the West End, the east and south (he did not reach the north) of London he found shopkeepers in all trades as busy as they could be, and pottery and glass dealers seemed to have their share of the rushing business. The fashionable arcades were crowded in the daytime, and the "street markets" were packed in the evening. In all districts customers from all classes of society deferred their shopping almost to the last day, and many thoughtless ones to the last hour, of Christmas Eve. Dealers in our trades made their windows more attractive than ever, and we may congratulate our subscribers on the bulk of business done. We heard but few complaints of the Christmas trade. We cannot call it "a complaint," but one dealer said, "We are getting tired of the rush and shall be glad when it is all over." We have reason to think this is not an isolated experience.

Recent Wills.—Mr. Charles Burn, of 21, Oakfield-road, Clifton, Bristol, and of Bralside, Bovey Tracey, Devon, a director of Messrs. Pountney & Co., Ltd., the Bristol Pottery, Fishponds, left estate valued at £22,544, with net personalty £21,482.——Mr. Sampson Hancock Ford, of Blackwood, Horton, Staffs., left estate valued at £13,248 13s. 1d., with net personalty £9,534 13s. 4d. Testator left £500 upon trust for life to his brother-in-law, John Edward Meir, then to his wife Betsy M. Meir, for life, with remainder to the United Methodist Church, called Mount Tabor, at Tunstall; £500 upon trust for life to his sister-in-law, Sarah Jane Walters, with remainder to his niece, Dorothy Hodgkinson; 250 shares in Ford & Sons, Ltd., Burslem, to his works manager, Joseph Robinson, in the hope that he will continue to be works manager.—— Mr. Isidor Straus, of Manhattan, New York, merchant, of Abraham Straus & Co., and of the Macey Company Department Stores, who died in the wreck of the "Titanic" on April 15 last, left $500,000 to each of his daughters Sarah Hess, Minnie Weil, and Vivian Scheftel, and to his wife Mrs. Ida Straus his town and seaside residences and his household effects absolutely, and a life interest in $1,200,000, with remainder as she may appoint. The testator's property in England is valued for the purposes of the English grant at £214 16s. 4d.——Mr. Charles Leonard Sankey, of Rosegarth, Bulwell-lane, Old Basford, Notts., of Richard Sankey & Co., Ltd., pottery manufacturers, left estate of the value of £15,459.

The United Earthenware Manufacturers, Ltd., 51, North John-street, Liverpool, have issued a circular, as follows, dated, Nov. 30, 1912:—The glazed earthenware manufacturers of Lancashire and Cheshire regret to inform you that owing to the recent great advances in the prices of lead, fuel, and raw materials generally, and advances of wages during the past few years, they are unable to continue to supply their wares at the low prices that have been ruling for some time past. In order to ensure an adequate return for the capital invested, and a fair remuneration for their labour, they are unanimous in the opinion that prices must be advanced, and the simplest way to do this seems to be by combination of interests. Kindly note, therefore, that the above company has entered into an agreement with each of the individual makers to purchase the whole of their output of glazed earthenware, but in order that customers shall not be unduly inconvenienced, each firm will continue to sell its own goods, acting as agent for the company. The individual makers referred to are, Peter Bailey & Sons, Heaton Mersey, Manchester; Beswick Pottery Co., Manchester; Bury's Earthenware Co., Sutton Pottery, Macclesfield; Richard Davies, Sutton Heath, and Marshalls Cross Potteries, St. Helens; T. & R. Duckworth, Broughton Barn, Oswaldtwistle; Jas. Holding & Sons, Broadfield Pottery, Oswaldtwistle; Jas. Johnson & Son, Smallbrook Pottery, Atherton; Johnson & Riley, Bradley Fold Pottery, Little Lever, and the Lancashire Pottery Co., Moss Side Potteries, Leyland.

The "Keramic Musical Society."—An interesting concert was given at the Doulton Institute, Lambeth, on Dec. 10, by the musical society connected with the Royal Doulton Potteries. A ladies' choir, the members of which are all drawn from the art studios, rendered part songs and choruses, and an orchestra, augmented for this occasion by friends from the South Place (Finsbury) Orchestra, gave with splendid effect Mozart's Symphony in E flat, and overtures by Schubert and Gounod, also accompanying Mr. Alfred Scriven (one of Messrs. Doultons' Lambeth representatives and a well-known amateur flautist) in Mozart's Flute Concerto in D. Miss Dorothy Gandy, as soloist, sang Cornelius' "Christmas Songs," and compositions by herself and Mr. Walter Gandy, Mr. Gandy himself acting as accompanist in the songs and conductor of choir and orchestra. Every year it is the practice of the artists on Doulton & Co.'s staff to bring together a collection of their holiday pictures, and with them line the walls of the concert hall. The exhibition this year was of special interest as it marked the 25th anniversary of these most enjoyable functions, many of the original contributors being exhibitors right through the series, and showing pictures this year. A further attraction consisted in the exhibition of needlework and embroideries submitted in a competition organised by Mrs. Orrok M. Doulton for the young ladies engaged in the work of the firm. The audience acted as judges in this competition, voting by means of their admission tickets, and the highest number of votes received by an exhibit carrying with it the award. Mr. and Mrs. H. L. Doulton, Mr. and Mrs. Orrok M. Doulton, Mr. L. J. E. Hooper, Mrs. Buckland, and many other friends were present at this most delightful gathering.

The Shops Act in London.—The London County Council, after careful consideration of the views submitted by the principal London trade organisations, has decided that any Orders which may be made under the above-named Act shall apply to any one or more of the undermentioned areas, save that as regards Exemption Orders other areas may be agreed to in very exceptional cases:—(1) The County of London (exclusive of the City of London). (2) A central area north of the river Thames, bounded as follows, the shops in the boundary thoroughfares named being included in the area: East—The boundary of the City of London (from the river Thames to Holborn) and thence along Gray's-Inn-road to King's-cross. North—From King's-cross via Euston-road, Marylebone-road, and Chapel-street, to Edgware-road. West—From Chapel-street via Edgware-road, Park-lane, Grosvenor-gardens, Buckingham Palace-road, and Commercial-road to Chelsea Bridge. South—The river Thames. (3) A northern area comprising the portion of the County of London (exclusive of the City of London) north of the river Thames, with the exception of the central area mentioned in (2) above. (4) A southern area comprising the portion of the County of London (exclusive of the City of London) south of the river Thames. It is very desirable, therefore, that any future applications to the Council for exemption or other Orders should apply to one or more of the areas specified. The Council is also taking informal preliminary steps to ascertain the views of the occupiers of the various classes

of shops as to the making of Orders fixing the day of the weekly half-holiday, and as to the day or days (other than Saturday as an alternative) to be specified in such Orders, if made, and it is suggested that the day to be fixed (other than Saturday as an alternative) should be Thursday for both north and south of the Thames. If this suggestion is found to be fairly generally acceptable, the proper steps will be taken to ascertain definitely as required by the Act, whether a majority of the shopkeepers of each class in each area is in favour of the proposed Order, and if so, the Order can then be made.

The Cornish China Clay Industry.—(From our own Correspondent.)—New developments in the vicinity of St. Austell are rapidly occurring, and works which would have been regarded at one time as unremunerative and struggling for existence are teeming with activity. A deposit has been discovered within a mile and a half from the town at Carwollen, and Mr. Hart Nicholls, jun., and his brother, Mr. Tom Nicholls, with a few others, have acquired a lease from Admiral Sir Charles Graves Sawle, M.V.O., at Greensplatt. About two miles from the town another discovery has been made by a local man who cut into a bed of clay whilst sinking a well to obtain water for domestic purposes. This fact was communicated to a china clay merchant, with the result that the finder has been handsomely rewarded, and that the foundations of a large clay work will shortly be commenced. At the recent annual meeting of the Royal Geological Society of Cornwall, held at Penzance, Mr. J. M. Coon, of St. Austell, read a most interesting paper on "China Stone," Cornish stone or petuntzyte. This rock was principally quarried in the parish of St. Stephen's and St. Dennis, near St. Austell. In the quarries the stone changed from a softish buff-coloured rock to one that was very hard and of a grey purple colour, owing to the presence of fluor spar. This was now preferred for potter's use. Mr. Coon was heartily thanked and was awarded £10 from the William Bolitho Medal Fund for his excellent paper. The ancient charter of Fowey is to be revived, and the Great Western Railway are contemplating the spending of £60,000 in effecting extensions for facilitating the transmission of china clay. During last month a Russian schooner, "Peter," went ashore at Scaw. The vessel contained a cargo of china clay for Riga, and it was found necessary to land the crew at Fredrikshaven. General sympathy has been expressed with the relatives of the late Mr. John Jennings, of Restormel Manor, Lostwithiel, one of the directors of the Carpella United China Clay Co. Mr. Jennings as a Governor of the St. Austell County School was attending a meeting when soon after his arrival he was observed to fall on one side, and before medical aid could be procured he expired.

NEW COMPANIES, COMPANY REPORTS, &c.

Bishop's Stortford Brick and Tile Co., Ltd.—Registered capital, £1,000 in £1 shares. Objects, to take over the business of a brick and tile manufacturer carried on by J. Day in Stanstead-road, Bishop's Stortford, as J. Day & Son, late J. L. Glasscock & Son. Private company.

Limassol (Cyprus) Brick and Tile Works, Ltd.—Registered capital, £45,000 in £1 shares. Business: Manufacturers of bricks, tiles, pipes, pottery, earthenware, &c., builders, contractors, general merchants and agents, &c. Private company. Registered office, 20, Princes-street, Manchester.

B. Fayle & Co., Ltd.—Registered, capital £18,000 in £1 shares (9,000 preference). Objects: To work and get ball, and china clay, &c.: to acquire the business carried on at Corfe Castle, and elsewhere in the Isle of Purbeck, Dorset, as B. Fayle & Co. Private company. Registered office, Corfe Castle, near Wareham, Dorset.

H. & R. Johnson, Ltd.—This private company has been registered, with a capital of £150,000 in £10 shares, to take over the business of manufacturers of and dealers in tiles of all kinds carried on by H. Johnson and A. G. Johnson as H. and R. Johnson, Cobridge, Alfred Meakin, Tunstall, and Sherwin & Cotton, Hanley, and to carry on the business of manufacturers of and dealers in encaustic and other tiles, bricks, pipes, &c. The first directors are H. Johnson and A. G. Johnson. Registered office, Highgate Pottery, Walker-street, Tunstall.

Bullers, Ltd.—The report for the year ended July 31, 1912, states that the volume of business shows considerable and satisfactory increase. The trading, however, has been adversely affected by the great rise in the prices of raw materials. The serious railway and coal strikes also caused heavy losses through stoppage of work and dislocation of business. Extensions have been carried out at the works to meet the increased requirements of the company's business. Several large contracts are on hand, and it is anticipated that the revival of trade will be continued. The accounts, after paying directors' fees and managing directors' salaries, show a profit of £11,415, which, with £583 brought forward, makes a total of £11,998. The interest on the preference shares, £7,500, has been paid, leaving £4,498. The directors propose to further strengthen the reserve account by the amount of £4,000, making that account £52,000, and to carry forward the balance, £498.

St. Austell China Clay Works, Ltd.—The second annual general meeting of the shareholders was held in London on Nov. 29. Mr. D. G. Collins, who presided, said that the directors had had a very difficult time, and a disappointing one, but they had now arrived at the position when they had overcome all their difficulties. They were now producing clay at the rate of 150 tons a week, and it was in the confident expectation of the board that that rate of production would not only be maintained, but would be increased. By the end of the year they would commence to dry, and by the middle of January to sell the clay. The company was now entering upon a period which must result in a very substantial production of high-class clay, which would be sufficient to finance the company out of the sales and to put it in such a position that it would be possible to reach a dividend-paying stage at an early date. He was confident that they had a very secure and safe investment. The works were now completed, and they had one of the finest china-clay works in Cornwall.—The report was adopted on the motion of the chairman.

Liens, Debentures, Satisfactions, &c.—Aylesford Pottery Co., Ltd.—Satisfaction reg., £500, part of amount reg. April 6, 1908.——Defries, Ltd., London, E.C.—Satisfaction reg. £1,000.——Triplex Safety Glass Co., Ltd., London, W.—Reg., £2,500 mort., to Cox & Co., 16, Charing-cross, S.W.; charged on unpaid and uncalled cap., &c.——Dressler Tunnel Ovens, Ltd. (formerly Northolt Tile Works, Ltd.), Hayes End (Mx.).—Reg. £100 debs. part of £2,000; secured by general charge. Also satisfactions, £4,000, reg. as to £2,300, Sept. 14, 1910; as to £600, Jan. 31, 1911; as to £500, June 17, 1911; and as to £600, Oct. 20, 1911.——Aston Magna Brick and Tile Co., Ltd.—Reg. £1,280 debs. part of £10,000; secured by general charge.——Tilghman's Patent Sand Blast Co., Ltd., Sheffield.—Reg. mort. or charge for securing all monies now due or to become due, to Lloyds Bank, Ltd., but not ex. the sum of £32,000; charged on land, works, foundry, and other buildings, engines, boilers, &c., at Broadheath, and Dunham Massey, Bowdon.——Cauldon (Brown-Westhead, Moore & Co.), Ltd., Stoke-on-Trent.—Reg. Trust Deed (supplemental to Trust Deeds dated Oct. 27, 1905, and April 5, 1906, for securing a series of debs.

for £40,000, of which £30,000 are issued and outstanding): also reg. mort. or charge by way of Trust Deed for securing £20,000 prior lien deb. stock; charged on (1) co's equitable interest in copyhold premises, Cauldon Place Works, Stoke-rd., Stoke-on-Trent, with land and premises at rear; (2) cap. redemption assurance policy for payment of £20,000 on Dec. 31, 1925; (3) assets and undertaking present and future (not hereinbefore mentioned) and uncalled cap.——Norbiton Potteries and Brickworks, Ltd., New Malden.—Reg. £2,485 charge, to R. W. Davies, 46, Chancery-lane, W.C.; charged on the lands, hereditaments, and premises in Beverley-rd., New Malden.

TENDERS ACCEPTED.

For the Hull Guardians:—Earthenware, G. B. Hobson & Son, Carr Lane.

For the Christchurch Guardians:—Crockery, Mr. E. W. Morrish.

For the Postmaster-General, Victoria, Australia:—British and Foreign Indent Co., 240,000 porcelain insulators.

For the St. George's-in-the-East Guardians:—Mr. Shepherd, earthenware, £278 7s. 6d., glassware £49 16s.

For H. M. Government:—Contracts let during November:—G.P.O.—Stoneware ducts, Albon Clay Co., Ltd., Woodville; insulators, Taylor, Tunnicliff & Co., Ltd., Hanley. India Office, Stores Dept.—Bottles (running contract), City Bottle Co., Ford's Park, Canning Town, E.; Eclipse Glass Works, Lea Bridge, N.E.; Lewis & Towers, Dalston Junction, N.E.; Ludford & Co., Brooksby Works, Homerton.

For the L.C.C. (recommended for acceptance):—Lamp glasses, J. B. Arch & Son, Boston, Lincs., 5 items, £19; City Glass Co., Invicta Wharf, Wharf-road, Cubitt-town, E., 1 item, £21; Falk, Stadelmann & Co., 83-7, Farringdon-road, E.C., 8 items, £313; Johnsen & Jorgensen, Ltd., 26-27, Farringdon-street, E.C., 3 items, £188; Reform Lighting Co., 210, Tower Bridge-road, S.E., 2 items, £51; Welsbach Light Co., Welsbach House, 344-354, Gray's Inn-road, W.C., 5 items, £19. Sheet and plate glass (schedule No. 22), J. Chater & Sons, 2, St. Dunstan's-hill, E.C., 1 item, £6; T. & W. Farmiloe, Ltd., Rochester-row, Westminster, S.W., 9 items, £676; Pilkington Bros., Horse Shoe Wharf, 10, Upper Thames-street, E.C., 2 items, £89; T. & W. Farmiloe, Ltd., Rochester-row, Westminster, S.W., 5 items, £283.

Contract Open.

Tenders are invited by the Norwegian Army Authorities for the supply of 300 salt cellars, 300 pepper pots, 3,000 flat plates, 3,000 deep plates, and 5,000 coffee cups. Sealed tenders, marked "Spisestel," will be received up to noon on Jan. 6 at "Generalintendantens Kontor," Christiania, whence also copies of the specification and form of tender may be obtained. Local representation by a resident agent (not necessarily a Norwegian) is required. In all Norwegian Government contracts a preference of from 10 to 15 per cent. (sometimes more) is given to Norwegian manufacturers.

CHANGES OF ADDRESS, NEW PREMISES, &c.

Dressler Tunnel Ovens, Ltd., have removed temporarily from Hayes End, Middlesex, to 2A, Wetherby-terrace, Earl's Court, S.W.

Greener & Co., glass manufacturers, Wear Flint Glass Works, Sunderland, have opened a showroom at Newmarket-street, Cornwall-street, Birmingham, where samples of all their goods, including lines for electro-platers, may be seen. Their agent is Mr. Frederick Davis.

Nicholson & Cartner, glass and china merchants, Lochinvar House, Castle-street, Carlisle, announce that the lease of the above premises being about to expire, they have decided to remove to the more central position, 29, English-street, after suitable alterations have been made.

A DISTINGUISHED CORNISHMAN.

Mr. Henry Sydney Hancock, St. Austell.

(specially contributed.)

FEW citizens in the china clay land are better known than the subject of this sketch. Mr. Hancock, who resides at Sydney-place, St. Austell, is the son of the late Mr. William Hancock, who was a well-known auctioneer and surveyor. He was born in the year 1849, and received his primary education at the Probus High School in the county of Cornwall, which was completed at Choisy-le-Roi, in France. Eventually Mr. Hancock became associated in his father's business, and he has surveyed no fewer than seventy different china clay works in the neighbourhood. As a reeve and mineral steward for the ancient manor of Treverbyn, he is directly concerned in over thirty of the principal china clay works. Perhaps a closer intimacy with the china clay trade is realised in that Mr. Hancock is the general manager of one of the best known companies in the trade, that of Thriscutt & Bale, who own the Caudledown China Clay Works, which produces some of the best potting and bleaching clays in the market. The developments, too, in this particular work synchronise with the rapid advancement of the industry. A new engine has been recently installed and a deep shaft sunk, which, with other improvements, have cost the company over £3,000. The new dry which has been erected adjoining the branch mineral line is over 300 ft. in length, and yet the works are taxed to their fullest capacity. A few years ago the Caudledown China Clay Works produced about 8,000 tons annually, but this has now been doubled.



Photo. by J. H. Coath, St. Austell.

Mr. H. S. Hancock.

Mr. Hancock's authority in this direction has been of great value in the Law Courts as an expert witness, notably in the big trials of the former Trerice China Clay Company and the Great Western Railway, also the Carpalla China Clay Company and the Great Western Railway. In both cases the clay companies were successful.

In municipal life the subject of our sketch occupies many important positions. He has been chairman of the St. Austell Urban District Council four times, and on the occasion of the visit of our King and Queen to St. Austell as the Duke and Duchess of Cornwall, their Royal Highnesses were welcomed by Mr. Hancock, who wore for the first time the civic emblem of honour bearing the St. Austell's armorial ensigns. This badge, which Mr. Hancock is seen wearing in the accompanying photograph, was largely obtained through his instrumentality and generosity. This civic regalia was subsequently presented to the Town Council by Mr Hancock to commemorate the Royal visit and his third year of office. The Urban Council showed their marked appreciation by passing the following resolution : "That the Council accept the gift of a civic badge presented by the Chairman, and tenders to Mr. Hancock its sincere thanks for the very splendid and appropriate gift as another evidence of the Chairman's interest in his native town, his regard for the administrative body over which he has been elected unanimously to preside on three successive occasions, and the generosity which had distinguished his public career." The Council also expressed their high appreciation of the services which Mr. Hancock rendered in making the visit of their Royal Highnesses the Prince and Princess of Wales worthy of the great occasion.

In the educational interest of the district Mr. Hancock has been equally active. For a period extending over twenty-six years he was clerk of the St. Austell School Board. He is now the chairman of the Local Board of Managers, Chairman of the Higher Education Committee, Chairman of Governors of the County School, and also Chairman of the St. Austell Joint Burial Board.

FELTS FOR POLISHING GLASS.

SEVERAL reports from U.S. Consuls on the Continent on the production of hard felts for polishing have recently been published, and are summarised below :—

GERMANY.—Hard felts for polishing metals, glass and other substances have been in use in Germany for many years, and are extensively manufactured in different parts of the country. The felt for polishing is usually made from sheep wool, cow and calf hair which has been carefully cleaned to free the raw materials from sand and other impurities. After being carded the hair is subjected to a treatment of sulphuric acid and then pressed into felt by processes which vary with the degree of hardness desired. The felt is then placed in a lathe and turned to the diameter required. For polishng metals, after the periphery of the wheel is roughened, it is covered with good Cologne glue and allowed to dry for about two hours. A paste consisting of Cologne glue and emery of a granulation depending upon the kind of polishing to be done—fine, coarse or medium—is then applied and the surface rolled in loose dry emery of about the same granulation. After drying in a warm place for six to twelve hours the wheel is ready for use. For polishing or grinding glass the wheels are usually treated with a silicions varnish (wasserglas) or glue. When the first-named material is used the wheels become much harder. There are generally four grades of wheels used, for rough, medium, smooth and finishing polish. Rough polishing is usually done with water mixed with powdered glass, coarse emery or sand. The other grades of wheels are used with finer emery, polishing rouge, Vienna chalk, graphite, or white stearin. Lampblack is sometimes used by the glass manufacturers for obtaining a very high polish. In the glass industry in some cases the wheels are made of wood or iron on which thick strips of felt are fastened with glue. Felt wheels are made in many sizes, but the most used probably range in diameter from 43 to 105 centimeters (16·93 to 41·34 ins.), with an average thickness of 20 millimeters (0·79 inch.) The following are net prices of wheels. f.o.b. Hamburg or Bremen, furnished by a prominent Silesian manufacturer of felt of all kinds, including felt grinding and polishing wheels, all 20 millimeters in thickness :

	1st quality.	2nd quality.
16·93 ins.	$0·476	$0·417
18·89 ins.	·751	·476
21·26 ins.	·655	·571
23·23 ins.	·833	·655
23·62 ins.	0·8925	0·714
31·10 ins.	1·304	1·071
41·34 ins.	2·856	2·023

The usual terms of sale are three months credit, with a discount of 2 per cent. for cash within 30 days. Official statistics of the foreign felt trade of Germany do not differentiate felt wheels, but they are included under the general head of "Other felt goods not sewed." The imports for 1910 and 1911 were nominal, while the exports in 1911 were 1,408 metric tons (metric ton = 2,204·6 lbs.), of a value of $1,415,386, as compared with 1,238 tons, of a value of $1,288,056, during the prevous year. The principal countries to which the felt was sent in 1911 were :—Great Britain, 351 tons ; Brazil, 118 tons ; Belgium, 77 tons ; Switzerland, 78 tons ; Sweden, 69 tons ; Chile, 56 tons ; Italy, 53 tons ; Netherlands, 51 tons ; and the United States, 47 tons.

FRANCE.—The manufacture of hard felts for polishing plate glass is confined in France practically to two firms, both of which have offices and depôts in Paris. Both are well established firms that make a large variety of mechanical felts, certain qualities of which are used for polishing metals, glassware, &c. One of these manufacturers has a large plant at Clermont, in the Department of Oise, and makes two qualities of hard felt specially adapted for polishing plate glass by machinery. These grades are designated, respectively, as Blanc Commune E. price 61 cents. per lb., and Beige Commune, F. price 52 cents. per lb., and are made in discs or sheets of any size required and of any thickness up to four ins. The second firm makes three qualities of felt for polishing plate glass : White, No. 3, price, 59 cents per lb. ; brown, B., price, 48 cents per lb. ; white, first quality, price, 96 cents per lb. The latter is used also for polishing metals by machinery. These felts are made either in discs or in sheets 1 meter (39·37 ins.) square, and orders for any ordinary quantity can be filled with a delay of four to five weeks. The prices above given are for France, delivery at the Railway station in Paris. Both firms are ready to offer the same prices for export, with slight discounts for large orders. There is a small export for these felts to Belgium, Switzerland, and Argentina, but the French-made machine felts are used principally in this country.

BELGIUM.—Hard felt for polishing glass is made by only two firms in Belgium. It is made from cattle hair which, because it is curly, holds together and acts better for polishing glass than ordinary felt made from wool. The raw material is cleaned and all substances employed in tanning such as lime, are taken out of it It is then spread evenly between two iron plates (pierced with holes through which vapour passes) and pressed while the plates move in opposite directions. By dipping in a solution of sulphuric acid of 7 to 10 deg., according to the temperature of the air, grease is eliminated from the felt. It is then, after being submerged in hot water, subjected to very heavy compression by machinery. In thickness the finished product is but one-fourth its original measurement.

Foreign Notes.

The Rowland & Marsellus Co., of New York, announce that their address in the Potteries is now King-street, Fenton, Stoke-on-Trent. Mr. Wm. Edwards is their agent.

The Ceramic Museum of Faienza (Museo internationale delli Faenze) which has been in course of formation, as a civic institution for the past three or four years, has just been recognised as a National Museum by the Italian Government. Information concerning the Museum can be obtained by applying to Signor G. Ballardini-Direttore de Museo Faienza (Italy).

China Clay Wanted in Italy.—H.M. Consul at Milan reports that a firm in that city makes inquiry for the names and addresses of British firms exporting china clay. The names and address of the firm may be obtained by British exporters of china clay on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C. Any further communications regarding the inquiry should be addressed to the British Consulate, Milan, mentioning THE POTTERY GAZETTE.

The German Porcelain Cartel.—At the recent annual general meeting of the German Porcelain Cartel, the question of the prolongation of the convention came up, and one firm objected thereto. Under the rules of the body it is therefore necessary to form a new association excluding the said firm. This will be done under the title of "Verband Deutscher Porzellanfabriken G.m.b.H.," with duration to January 31, 1920. The chief firms outside the Cartel are the "Triptis" of Sorau, Tielsch & Co. of Altwasser, and Hermann Ohme of Neu-Salzbrunn.

Window Glass in Colombia.—The Acting British Vice-Consul at Bogotá, in furnishing a list of names of dealers at that place who might be prepared to undertake agencies for the sale of British-made window glass, points out that at present more than half the window glass sent to Bogotá arrives broken, and emphasises the consequent need for careful packing. The names of the dealers referred to may be obtained by British manufacturers of window glass on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., mentioning THE POTTERY GAZETTE.

The International Plate-Glass Convention.—Negotiations have (writes the Brussels correspondent of "The Times") recently been concluded whereby the present International Plate-glass Works Convention is to be definitely renewed for a period of ten years—namely, from Aug. 17, 1914, until Aug. 17, 1924. The object of the Convention is to regulate in all markets the prices and conditions of sale of finished plate-glass, and to limit the output of the different works in order to equalise production and consumption. Almost all the plate-glass works in Europe have adhered to the Convention, except the Société des Glaces de Courcelles (Belgium) and the firm of Pilkington Brothers, Ltd., at St. Helens (England), but, whilst not being bound by any formal agreement, these two works are nevertheless observing the prices set forth by the convention, and it is reported that negotiations are now pending with Pilkington Brothers, Ltd., for a limitation of output. An interesting feature, of far-reaching importance to the future of the industry, in connection with the renewal of the convention, is that it has been decided to form a trust of the plate-glass industry under the name "Union Internationale et Commerciale des Glaceries," the organisation of which is now being considered by the interested parties. It is proposed that the trust shall have a capital of two million francs (£80,000), to be subscribed by the different companies. It is claimed that the main advantage of this organisation will be the complete supression of all competition, not only as regards prices and conditions of sale, but also as to the conditions of packing and the quality of plate-glass.

U.S. Duty on Ceramic Colours.—The United States Court of Customs Appeals has affirmed a decision by the Board of General Appraisers, which had sustained a decision of the collector of Customs in classifying certain importations of powders composed in different proportions of silica, alumina, alkalis, tin, copper, zinc, magnesia, &c., under paragraph 56 of the existing tariff law. Objections to the classification made by the importers, L. Reusche & Co., that some of the imported materials were white pigment containing lead and dutiable under paragraph 53 of the Tariff Act or under 110 as fusible enamel. The collector held that the merchandise was dutiable as ceramic colours under paragraph 50. The decision, as printed in the New York "Oil, Paint and Drug Reporter," says :—"We have examined the record with great care in an endeavour to discover therefrom a line of demarcation controlling the dutiable classification of this merchandise. We find it impossible. Paragraph 56, quoted, enumerates 'glazes,' 'fluxes,' 'enamels' and 'colours.' Paragraph 53 as well as 56 speaks of certain 'pigments.' Paragraph 110 speaks of 'fusible enamel.' While practically all of these terms are frequently used by the witnesses and counsel in the testimony in the case, there is nowhere drawn distinctions between them. The testimony speaks of differences between 'glazing,' 'fluxing' and 'enamels' and 'colours,' but fixes no distinction between them. Upon the whole one cannot read this record with care without being impressed with the distinction between colours to be used in enamels and the enamels as a completed article; and that these importations are colours or colour matter to be used in the making up of the enamel rather than the enamel itself. The appellant himself, when on the witness stand, recognised this distinction as applied to this merchandise. He testified (p. 14, Record) :—Q. By the way, overglaze colours and enamels are more or less interchangeable terms ?—A. Not to any extent. Overglaze enamel colour prinicipally. They are called enamel colours. So near as we are able to gather from this record that statement of the appellant marks the principal distinction between these importations and enamels. That is to say, overglaze enamel is used as a colour in the making of enamels. It is a colour, therefore, and one of the materials for making rather than the enamel itself. In any event, it is known as a 'colour' rather than an enamel. Reading the record as a whole, we are unable to discover therein any testimony or evidence which would warrant either the Board of General Appraisers in disturbing the decision of the collector or this court in reversing the decision of the Board of General Appraisers."

Chinaware to the value of £2,990 was imported into Honduras during the year 1911-12, the trade being shared as follows :—U.S.A., £1,305; Germany, £1,484; U.K., £172; other countries, £29.

Glassware and glass were imported into Curaçoa last year from the following countries :—Germany, £1,154 8s. 4d.; United States, £300; Netherlands, £291 13s. 4d.; United Kingdom, £187 5s.; all other countries, £64 13s. 4d.



Obituary.

ALBERT LOVATT,

Aged 63.

WITH sincere regret we record the death of Mr. Albert Lovatt, the senior partuer in the firm of Lovatt & Lovatt, potters, of Langley Mill, near Nottingham. The deceased was well known in the trade, and his death is a distinct loss to the industry. Though not in robust health, he had been ailing but a comparatively short time, and a fatal termination of his illnsss was not anticipated. He, however, passed away at his residenee, Edstone House, Laugley Mill, on the morning of Nov. 23, after a life of strenuous business activity. As years eount he was not an old man, but he had accomplished much in the eourse of his business career. Two features in his eharacter are especially worthy of eommendation and of imitation. He had other estimable qualities, but his enterprise and his modesty have for long been admired by those who knew him intimately. We believe he was a native of Belper, and commenced his business life at a pottery and has been aetively assoeiated with the industry ever since. In 1883 he (together with his brother, Mr. John Lovatt) entered into partnership with Mr. Calvert, the proprietor of a small pottery at Langley Mill, whose principal productions were ginger beer bottles, ink bottles, and blaeking bottles. They traded as Calvert & Lovatt till the retirement of Mr. Calvert in 1895, when the brothers took over the business. Shortly after this two sons of Mr. Albert Lovatt (Mr. L. H. and Mr. Bert Lovatt) were taken into partnership, but the firm did not have the benefit of the elder son's assistanee for loug, as Mr. L. H. Lovatt died in 1900. Sinee 1900 the business has been earried on by Messrs. A. J. and B. Lovatt under the title of Lovatt & Lovatt. Great improvements have been made in the manufacture of stoneware in the last quarter of a century, and Lovatt & Lovatt have materially eontributed to them. Their business has increased and improved, just as the manufacture of stoneware has developed and improved. To the manufacture of ginger beer bottles and blaeking bottles artistic forms with beautiful decorations were gradually added, and "Langley Ware" is now recognised as "art pottery"—the result of the enterprise I have alluded to.



[*Photo. by J. H. Winter, Derby.*

MR. ALBERT LOVATT.

Those who to-day see (as I have seen) the eollection of samples of beautiful art pottery displayed by Joseph Loekett & Sons, Ltd., the firm's London representatives, will find it difficult to believe that less than thirty years ago the works produced nothing but plain stoneware. One statement will illustrate the rapid development of the firm's business as clearly as a page of printed matter would. In 1883, Calvert and Lovatt employed twenty persons, all told. To-day Lovatt & Lovatt find employment for 400—including their representatives outside the factory. This marvellous change is due to the energy and sound praetical knowledge of the deceased and his partuers. It has been our privilege to come in personal contact with the late Mr. Albert Lovatt, and a more modest, unassuming business man we never met. With the responsibility attaching to a developing business, it is not surprising to learn that while interested in all that concerned the district in which he lived, the late Mr. Lovatt took no active part in public life. He was esteemed by a large circle of business and private friends, and especially by those who saw most of him—the employees of the firm. He leaves a widow and two sons, to whom and to the members of the firm we extend our sympathy.

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

CHARGES FOR STRAW AND PACKING.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I am pleased to see the question of straw and packing referred to, and hope the subjeet will be well sifted. There is something radieally wrong for one manufacturer to charge 5s. for crate, credit on return, 2s. straw and packing, and his neighbour (a far larger firm) to charge for same size and quantity 5s. 6d. for the crate. and 5s. 6d. straw and packing.—Yours, &c.

Dec. 3. A LONDON DEALER.

BUSINESS MEN AND ACCESSIBILITY.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I am writing to you to send the enelosed copy of something recently published in our country which I think you may possibly wish to re-publish in your GAZETTE as a commentary on what is said on pp. 1220 and 1221, about the manner of receiving people in certain business offices :—

"Red tape is obstructive. It is a noticeable fact that the way to the offices of most of the biggest exeeutives in every line is open. It is easy to reach the desks of men controlling thousands of employees and hundreds of thousands of dollars. The reason is that they believe that everybody who wishes to see them may be able to yield an idea, and they are not taking chanees on losing them. The head of a big corporation was visited not long ago by a business writer, who commented on the fact that he was not compelled to present a card nor to state his business, and was permitted to walk through to his office without being compelled to sit down and wait until he should be summoned. 'This is a new experience for me,' he said. 'Why is it that you have no sign on your door saying, 'Private,' and no guards outside to halt those who appear to be Philistines?' 'There are several reasons,' he replied. 'One of them is that I used to be a salesman, and in my tours of the road I computed that if all the time unnecessarily wasted by representatives of eoneerns which sold through

travelling men were applied to useful purposes, enough additional wealth would be created to make us all millionaires. The other is that I don't stand much chance of losing when I let a man in. If he has something I don't want, I tell him so, and he goes. If he has something that I can use to advantage, he is doing me a favour. I am indebted to him for calling, and I want to hear all that he has to say, just as quickly as he can say it.''—Yours, &c.,

A New York Subscriber.

New York City, U.S.A., Dec. 8, 1912.

CAN HARD PORCELAIN BE MADE IN ENGLAND?

TO THE EDITORS OF "THE POTTERY GAZETTE."

Sirs,—I should like to reply to the article in your last issue, entitled "Can we not make hard porcelain in England?" I have lived 4½ years in England, most of the time in Staffs., and as a pottery chemist I have been assisting English potters in such questions as the above. I am very much interested in the welfare of the pottery district of England, and I have tried to grasp the situation there. I have been employed as scientific adviser to one of the greatest works there, so I have had ample opportunity to become familiar with every material used in the Potteries. The sagger clay of the district, or as they call it in Staffs., the sagger marl, is not of the best quality. The "sagger marl" used in Staffs. is all right for a lower heat, but not for production of a ware needing a greater heat, such as the German hard porcelain.

Your English people are too conservative; they stick to this sagger marl they are using because their great-grandfathers have used it. They have to pay for this conservativeness. Generally speaking a sagger in an English earthenware factory will last no more firings than seven or eight times; in a bone china works five or six times. As against this, the saggers in the Continental works will last much longer. In German hard china works the saggers have to stand much greater heat than even your bone china biscuit heat in England, and still they last fifteen or more firings without a crack. Does the modern English potter realise the great difference? It will amount in a large works to £1,000 in a year. Just think how much money is thrown away every year to the sagger makers, and still there are never enough saggers.

The trouble is in the sagger marl itself. At the time when competition was not so great—many years ago this sagger marl was alright, but the time has arrived now to sit down and calculate which is cheaper, to use the local clay or to use a more expensive material from a distance. It is not correct to say that German china works have their china clay and sagger clay beds close to their works. I have been in very many large works where they had no clay, nor even coal near by. I wish I had the opportunity to prove my statements, that even if you buy in England the clay for saggers from the Continent, you would save money by it.

I have seen saggers in Germany and Austria which stood 20 times of firing, to say nothing of smaller plate saggers, which stood many more.

The writer of your article suggests some ideas which struck him several times, too, while working in England. England possesses some very fine clay deposits for the fire-clay goods. Why not use for saggers fire clay of which your famous "Glenboig" and other makes of fire bricks are made from? Going further a step, instead of sending the clay, which contains 10 to 20 per cent. of moisture, besides the 8 to 13 per cent. of chemically combined water, why not manufacture the saggers on the spot, and send them ready-made to the Pottery district? Erect a large sagger-making plant at the spot where those famous fire bricks are made, and the Pottery district would have a sure supply of better, more reliable and cheaper saggers, and no more trouble with the sagger makers, &c.

As we know, a good sagger clay should be high in alumina (Al_2O_3) content, therefore highly basic in nature, free from free silica (SiO_2), and free from alkalies, especially from Quarc sand, therefore highly refractory. The nearer it stands to cone 36 the better its melting point. Besides, it has to have the nature to stand a certain weight in the fire. I have often heard practical potters say, "Our sagger marl will stand the weight (28 or even more high in the ovens) better than most of the fire clay we have ever tried." Certainly; but put the saggers made with a highly refractory clay first time to a greater fire as used afterwards. For instance, if you make bone china at cone 8, to have better saggers you ought to fire your saggers at the first time to, say, cone 14. It is of no use to put the very best, for instance the Rakonitz clay into your saggers, if you do not fire it to a point, where that material will burn close enough to stand the required weight in your ovens. The conclusion, therefore, that with the present equipment the potters themselves cannot use a better clay for their saggers, unless they build a special kiln to fire their saggers in, for the first time at a higher heat than the saggers have to stand after in use.

It is a great mistake, too, to fire the green saggers below the crown, on the top of the bung; and why? Because the cooling process is quickest on the top and the slower we cool the saggers the better they will hold the fire afterwards. You will remember the case of the quickly cooled glass drop. I know that you are compelled to fire the green saggers there, because you could not put it below, and I know, too, that from the time of Wedgwood you are doing it so. Nevertheless it is wrong, very wrong. To-day we have to reckon up every penny.

To help on the sagger question, I second the motion of my predecessor in your last issue—to let the fire clay goods maker erect a special sagger-making plant where there is a far better clay for it, and an equipment to fire the saggers at a higher heat.—Yours, &c. K. Eleod.

Beregszász, Hungary, Dec. 11.

ANSWERS TO CORRESPONDENTS.

F. G.—We do not know any work giving a series of illustrations of "Rockingham Ware." We assume you refer to "Rockingham China," which is not made now. The "Rockingham Ware" to-day consists of the well-known brown and chocolate-coloured teapots, &c., made by several manufacturers. Earthenware and tiles were made on the estate of the Marquis of Rockingham 150 years ago, but about 1825 the then owner of the works commenced to make porcelain there, but did so without any regard to cost, and produced a paste of great excellence, decorated by most skilful painters in a style that was more gaudy than tasteful. The ornamentations were so lavish that, although high prices were obtained, there was a loss on everything produced, and the works were closed about 1842. Rockingham china was marked with the Rockingham crest—a griffin with the words "Rockingham Works" and "Brameld," the name of the proprietor. If your piece is "Rockingham China" it should bear this mark.

CORRESPONDENTS' INQUIRIES.

C.C. Bowls [2819]. — A subscriber in Newfoundland wishes the names and addresses of makers of covered dipped C.C. bowls 36's, of low grade. We will forward to him such addresses if manufacturers who specialise in this ware will advise us.

H

Fragments.

¶ Comments on our 1913 Diary :—From Manchester : "Splendid value ; makers' addresses most useful."—— From New York : "The 1913 Diary came safely to hand ; it will be splendid for reference." From Oxford : "Enclosed please find cheque 7s. 6d. in payment of subscription for POTTERY GAZETTE and Diary, the latter alone being worth double the money."

* * *

¶ In search for a trade mark, asked for by a subscriber, we looked through fifteen recognised books of reference published in this country without any result, yet, singular to state, we found it in an American volume on ceramics.

* * *

¶ A retail firm write : "We enclose cheque for another year's issue of THE POTTERY GAZETTE. We think this is the nineteenth or twentieth year." We thank our friends for their loyal support, and hope we may be able to serve them for several such extended periods in the future.

* * *

¶ Our new Prize Competition (p. 35) is of direct value to manufacturers ; the result will also be useful to retailers as an indication of the really popular lines of goods.

* * *

¶ The M.P. for Stafford has announced that he will give a silver mug to the first child born in his constituency on Insurance Day, Jan. 15. Why not give a crockery one, and so encourage one of the country's chief industries ?

* * *

¶ A new White Star Liner, named the "Ceramic" was launched on Dec. 11. She will be engaged in the Australian trade, and will not be likely to "potter" about.

* * *

¶ "There is no trademark so good to any man as his own name." This is one of the arguments raised against the proposed Empire trademark. This may be so if the name be Goode, but how if it be Badd ?

* * *

¶ Once again a daily paper has perpetrated an egregious "howler" concerning the Potteries. In writing about the "Trade Boom" in the Potteries, in the "Daily Mail," a Mr. Basil Clarke has made himself a laughing stock by his account of potters, who in consequence of the revival of trade, he says, "have begun to make pots in their own homes, in their own little back gardens. Burslem I hear has several domestic 'pot-banks' of this kind. Small ovens have been set up in gardens and back yards by enterprising workmen. Clay and moulds have been bought ; the pots have been made in the house and then baked in the little garden ovens. Then they have been sold to manufacturers whose main business is the decorating of pots. This home work I hear was first begun purely as home work—to be done after work in the potteries was finished. But one or two families are now devoting all their attention to these small garden concerns. They make just the rougher table ware, of course, not very expert stuff, and the finishing has to be done elsewhere. Still the men contrive to do quite fairly for themselves." We are sure that our friends the potters will appreciate the enhancement of their Christmas mirth by this admirable bit of absurdity. We can imagine them hilariously sallying forth to seek a "pot-bank" between the "washus" and the coal-hole in their little backyards.

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

AS I write, on the Eve of Christmas, the potting trade is witnessing the end of a year which, even for an industry that has experienced remarkable and varied vicissitudes, is unprecedented. It has seen a complete dislocation of business for more than a month, and yet has had probably a record turnover ; it has obtained in the aggregate higher prices than heretofore, and yet has probably made less profit than in leaner years, for the cost of production has reached a ratio that could never have been imagined a decade or so ago. It has certainly been a busy time, but it has also been an excessively worrying time, and the net results I fear will not in most cases be commensurate with the energies, the scheming, and the forethought that have been necessitated throughout the twelve months. The past few weeks have seen a slackening off in the demand. Orders from the home market for this year's delivery having been given, the demand for goods for the new year has not been considerable ; in fact, some manufacturers, particularly in the Longton china trade, state that it has been below that of last year. Business from foreign and colonial customers, too, has been falling off somewhat. This easing off of the demand is, however, usual and quite natural for the last month of the old year and the first of the new, but it is felt more by those engaged exclusively in the British market than those whose business is of a mixed home and oversea description. The reason is not far to seek. In the case of the British market, when the Christmas trade has been supplied, there is a comparatively blank period before the new year's orders begin to come to hand, but in the case of the foreign and colonial trade, there is only a slackening rather than an almost complete cessation of demand.

This differentiation is responsible for the fact of the lengthy holidays which are being given in certain instances. Some of the largest factories, which are engaged both in home and shipping trades, are closing for not more than two days, many others will cease operations for a little longer period, but some few closed during the week before Christmas for an unusually lengthy time. The latter are chiefly china and other manufactories that cater entirely, or almost entirely, for the home market ; and the Christmas rush of business having been met, they are without sufficient orders to justify a continuance of operations. Earlier delivery of goods for the Christmas trade is now invariably demanded ; retailers are no longer satisfied to receive consignments barely in time for the festive season's shopping, and so manufacturers get through their end of the year business sooner than they formerly did. The prospects for 1913 are, however, good, and unless something unforeseen of a national or international character occurs to disturb the commercial world, a further period of brisk demand should be in store. Many prophets anticipate another six months' good trade, and every one will hope that the "boom" we have heard so much about may have an even longer life than the prophets predict. Moreover, such prosperity has been enjoyed in the staple trades of the country that it is only reasonable to expect that the British public may demonstrate their spending capacity by so far depleting the stocks of dealers

that orders will be arriving in the Potteries plentifully and speedily in the new year.

The value of the export trade in November was £302,442, as compared with £348,018 in the preceding month, £293,169 in the corresponding month of last year, and £263,750 in the same month of 1910. Business with the United States, which is now in an unsettled condition in view of the anticipated tariff revision, amounted to £41,790. This was slightly worse than in October, but £10,000 better than in November of last year. The November shipments to Canada amounted to £49,738—over £6,000 less than in the previous month, but £12,000 more than in the corresponding period of last year. The South American trade was not so satisfactory, amounting to £17,669 in the case of Brazil, and £21,261 in the case of the Argentine, the corresponding figures for last year being £18,754 and £24,071, respectively. Trade with the Antipodes was also on a lower scale, the Australian exports reaching only £25,377, as against £34,201 in the same month of last year, and the New Zealand shipments amounting to £11,495, as compared with £15,066. The British East Indian business amounted to £19,789, which was £7,000 less than in October, and nearly £6,000 less than in November of last year. Trade with South Africa remained steady at £15,560, though this total was over £1,000 less than in the corresponding month of last year. Exports to France continued at a satisfactory level, namely, £10,679, an increase of £2,400 over November of 1911; but the shipments to Germany were over a thousands pounds lower than in the same month of last year, namely, £7,604. Business with other countries was well maintained at £81,450, as against £72,760 in November of last year.

As remarked above, the year drawing to a close has been a singular one. It has been a twelve months of good trade, if judged only by the standard of bulk, for when the turnover comes to be totalled up it will probably be found to have been a record one. The export returns for the eleven months indicate that that will be the case in regard to oversea business, and the proportion of home trade should not be much worse. But bulk of business is not the only factor to good trade—using the term in its proper meaning. The year's operations have been dominated by the coal strike, and the situation has been complicated by the largely increased cost of production, together with a more or less successful attempt to compensate by means of enhanced selling prices. The year opened with a promise of good business, both in the home and shipping markets, but just as February was concluding the coal strike occurred, and the paralysis of the potting trade was even more sudden and complete than would have resulted from a general strike of pottery workers themselves. We all knew it, but few of us realised until then how completely the potting trade is dependent upon the regular working of the collieries. For five weeks the stoppage continued, and only came to a conclusion on April 6. Meanwhile, orders had been coming to hand from oversea countries, and from at home also, for fortunately all industries were not crippled as was the pottery trade; and when business was resumed in Easter week, a period of almost feverish activity set in and continued until the Wakes holiday without cessation.

That briskness, however, could hardly be described as a healthy activity—or one that would produce a profit proportionate to the energies put forth. The whole of the works had been standing unproductive, but incurring dead expenses all the same; then suddenly they were revivified into a condition of abnormal productivity. Such a condition of affairs is not conducive to economy of production or satisfactory eventual results. Meanwhile, prices of materials, already high, had continued their up-grade movement, and immediately after the strike coal prices began to advance alarmingly. In addition, six weeks prior to the Settling Day (March 25) the operatives, many of whom had obtained a 5 per cent. increase during the preceding year, gave notice of increased wages in various departments. These applications were settled by agreement, the chief concessions granted being an advance of 3d. per day to ovenmen, bringing their wages up to 5s. 6d., and 5 per cent. to printers and transferrers. On the top of all this came the further increase in local rates, the Stoke-on-Trent Council levying during the month of June rates which represented advances varying from 8½d. in Longton to 1s. 9d. in Hanley. But the burden of the manufacturers was not even then complete, for before the Stoke Wakes holiday had arrived the National Insurance Act had come into operation, bringing with it what was in effect a heavy addition to the wages bill. In consequence of this increasing expenditure coming upon the trade, manufacturers had decided, in order to recoup themselves somewhat, to advance selling prices, the increases agreed upon bringing the "plusage" nominally up to 12½ per cent. in the case of earthenware, and 15 per cent. in the case of china.

For a time these increases retarded the demand for goods, dealers hoping that the advances would be temporary and that they might be able to "get in" at a reduction; indeed, but for the fact that manufactories were being put to their utmost capacity to make up for the coal strike arrears of business, the activity would not have been so great as it was before the August holidays. Following them there was a natural lull and a brief period of uncertainty, but buoyancy soon asserted itself and brisk trade was enjoyed. This continued—though perhaps more so in the oversea than the home departments—until the end-of-the-year slackening, which has been referred to, set in. Figures are, of course, not available for the British trade, but the export returns show that a remarkable volume of goods has been shipped during the year. The total for the first quarter of the year, which did not indicate in any marked degree the effect of the coal strike stoppage was £753,237, compared with £745,349 in the same period of 1911, and £608,175 in the corresponding quarter of 1910. When the half-year's returns were available, however, some idea of the loss incurred in regard to foreign and colonial markets became apparent. There was a decrease as compared with the corresponding half-year of no less than £130,433, the actual totals being £1,368,306 in the first six months of 1912, £1,498,739 in the same period of 1911, and £1,272,635 in the same period of 1910. It says a good deal for the volume of goods turned out in the Potteries that the end of the third quarter—Sept. 30—showed that the loss had been reduced, as compared with the corresponding nine months, to £45,881. The figures were:—£2,216,631 in the first nine months of 1912; £2,170,750 in the same period of 1911; and £2,003,214 in the same period of 1910.

Another month, and the loss so far as actual turnover was concerned had been more than made good. The returns for the eleven months ended November show that the value of shipments was substantially better than in the two preceding years, being £86,619 in advance of 1911. The total trade of the eleven months was worth £2,867,091, compared with £2,780,472 in 1911, and £2,534,887 in 1910. The aggregate for the twelve months of last year was £3,030,053, so that, assuming the December business reaches what might be reasonably expected,

the total for the twelve months of this year should equal, if not exeeed, that of 1911—whieh was itself a reeord figure. It is, however, remarkablc that the returns as to quantities of ware exported show a eonsiderable disparity as eompared with values. The quantities of ware exported during the eleven months reaehed 3,498,616 cwts., as against 3,699,825 cwts. in the same period of 1911, and 3,232,382 ewts. in the same period of 1910. These show a falling off of 200,000 cwts. this year as compared with last, and the explanation of this lack of agreement between values and quantities is not easy. The chief reason would appear to be thc higher selling priees prevailing, though another faetor may to some extent have entered into it, namely, that a higher class of goods has been exported to some degree, and eonsequently a better price paid for less weight of ware.

In regard to individual ovcrsea markets, Canada for the first year in the history of the potting trade has superseded the United States as the chief export customer, a brisk demand having been experienced throughout most of the months of the year. The total Canadian trade for the eleven months was of the value of £435,076, compared with £369,687 in the same period of 1911, and £333,001 in 1910. The development of this market is obvious when it is pointed out that for the whole of the year 1905 the Canadian trade only reaehed £189,088, though two years later, in the "boom" year of 1907, it had advaneed to £305,372. The United States demand has been lifeless during most of the past year, though the later months showed a somewhat brisker demand, and the total business only reached £374,469 for the eleven months, as against £399,550 in the eorresponding period of 1911, and £475,544 in the same period of 1910. It is, however, to be hoped that a tariff reduetion will follow the Demoeratic vietory at the Presidential eleetion and that better trade will then be experienced. Until the seeond half of thc year the South American trade was not up to the previous year's standard, and the eleven months ended with a total of £201,850 in the ease of Brazil (an inerease of £7,800 on last year), and £238,883 in the case of the Argentine (a deerease of close upon £15,000 on last year). The British East Indian trade, despite some fluetuations, has been fairly well maintained, and the total for the eleven months, £208,774, is only £700 below the high figure of last year. The South African has been a slowly but steadily improving market since June, and the eleven months' figure is £121,904, eompared with £120,381 for the same period of last year. Trade with the Antipodes was less buoyant for several months prior to August but then improved eonsiderably, as was to be expected in view of the large immigration and the good eommereial conditions. The Australian total for the eleven months is £289,544, as against £281,899 in the same period of the previous year, and £234,586 in 1910. The New Zealand aggregate is £118,072, as against £113,590 in 1911, and £95,971 in 1910. In regard to the Continental trade a mueh better turnover has been realised with Franee, the eleven months' figure being £91,056, as compared with £78,696 in the eorresponding period of the previous year. Business with Germany has, however, been lower, the respeetive totals being £66,088 and £73,836. Trade with "other eountries" in the eleven months aggregated £721,375, as against £685,761 in the samc period of last year.

Having shown that the volume of trade transaeted during the year has been exeeptional, it is now neeessary, in order to arrive at an aeeurate estimate of the value of all this business, to deal in some detail with the circumstances whieh have gone to make this bulk of turnover good trade or otherwise. Those circumstanees are, first, the enhanced cost of production; and, second, the higher priees obtained for goods. Dealing with the first point the most serious faetor has been the inereased cost of materials. Every artiele which goes to the manufacture of earthenware and ehina is at a higher figure than obtained at this time last year, with only two exeeptions —gold and cobalt. But the most serious advance is in respeet of fuel, the increased eost of which is commonly eomputed by manufacturers to be 40 per cent. over last year's priees. The advance is at the least 2s. 6d. per ton but that does not represent the total increase, for slaeks and the lower grades of fuel are beeoming inereasingly difficult to obtain and manufacturers are compelled to use higher grades at a eorrespondingly enhanced cost. The effect of this 40 per cent. increase may be imagined when it is pointed out that a few of the largest potteries will eonsume as mueh as 500 tons per week. Unfortunately, there does not appear to be an end to the increase in fuel prices, for the miners are now applying for a further advance in wages amounting to 5 per eent., and for every 5 per cent. advance in wages the eoalowners impose 6d. per ton. There is, indeed, a serious outcry in the Potteries against the eolliery proprietors, for it is contended that the increased cost of raising coal is not so great as to justify thc advance in coal selling prices that has been imposed. Certainly 5 per cent. in wages does not anything like amount to 6d. a ton on the coal produced; some say it is only equivalent to 2d. a ton, but as to that I cannot give an opinion. A month or two back I dealt with the eoalowners' side of the ease. They certainly have had imposed upon them heavy burdens, but I think they have well reeouped themselves.

Compared with twelve months ago, lead is up 50 per cent., the price last year being £18 5s. per ton and at the present time £27; Cornish stone is up no less than 100 per cent., and bone is something like 33 per cent. over last year's priees. These are just a few examples of the inereased figures whieh obtain in the case of every potters' material, exeept the two I have specified. Not merely materials, but sea freights are at an alarmingly higher level. The cost of freightage for clays, &c., is more than 60 per cent. up, and for flint from Franee 100 per eent. higher. This, however, is not the worst feature; it is praetically impossible to get boats at the present time, and potters are working from hand to mouth so far as many materials are eoncerned. This position at the present moment is a very serious one. One of thc largest manufaeturers in the district told me a day or two ago that hc was experiencing the greatest diffieulty in this respeet, and that the only way just now of getting clay from Devon or Dorsetshire was to have it consigned by rail, whieh, of eourse, means an added expense so far as freightage is eoneerned. But materials and freights are not the only eause for enhaneed production cost. I have referred to the questions of increased wages, local rates, and the tax imposed by the Insurance Act. The latter is a big burden. It amounts to between £40,000 and £50,000 in the Potteries, and means for a moderately-sized faetory employing about 400 hands approximately £300 a year. Now, of eourse, there is the prospeet of the inereased expenditure involved by the new regulations, the enforcement of whieh eannot now be long delayed. Thc inquiry is over, and on Dee. 12 Mr. Ellis Griffith (Under-Seeretary for the Home Offiee) stated in the House of Commons that he expeeted to reeeive Judge Ruegg's report very shortly.

Reference must now be made to the second point that has to be taken into aeeount in estimating the true value

of the turnover—namely, the increased selling prices. In the early part of the year it was agreed by the associations to increase the "plusages" to 12½ per cent. in the case of earthenware and 15 per cent. in the case of china, or to advance prices of goods proportionately. So long ago as July of 1910 it was decided to impose "plusages" of 8⅓ per cent. in the case of earthenware, and 5 per cent. in the case of china, and during 1911 some further increase was made in the latter case to approximately 10 per cent., so that the past year's advances were not very considerably higher than those previously agreed upon. But the customs and circumstances in the potting trade have always been such that no real uniformity has been achieved. In some cases "plusages" have been added to the invoices; in others, the selling prices have been individually advanced, but by whatever means the increase has been imposed it has varied. This has been the case in the past year, and while some have obtained the full extent of the advance, others have obtained less, and in the case of one very large manufactory, I was told a day or two ago, the the firm has been unable to obtain any advance whatever over last year's prices, largely for the reason of the lack of combination and uniformity of practice that obtains. The net result is that although taking an average of the factories throughout the Potteries, some advance has been secured during the year, the amount of it has not been at all commensurate with the increased cost of production. Indeed, the proportion of profit to turnover is likely to be at a considerably lower ratio than in the preceding year. The position was put to me rather tersely last week by a manufacturer when he said that it was the colliery proprietors who had made the profits, and not the potters.

The pottery manufacturer is certainly working under great difficulties, and under a higher proportion of increased expenditure than in most industries; he has keen competition too, but, as has been remarked to me on more than one occasion lately, his worst competitor is his neighbour, who manages by neglecting to come into line with his fellows to keep prices at a level, which makes business less profitable than it ought to be. A manufacturer recently remarked to me that local pottery producers would do more good if they would work together to secure a firm combination, instead of, for instance, "fighting" the marl producers, and the cratemakers, who by good combination have secured better prices, of which they were badly in need. There is, I believe, some reasonable hope of better organisation amongst pottery manufacturers, for decided steps are being taken to that end. The whole question of prices has to come under revision immediately, and a determined effort is to be made to adopt some system, and to put uniform advances into operation. Goods are undoubtedly worth more than is on the average being paid for them, and a larger price can be obtained by united action, of which the trade has long stood in need.

Some anxiety is being felt in commercial circles regarding the effect of the "One Clause Railways Bill," which the Government have introduced in fulfilment of the promise made to railway companies at the time of the strike settlement in 1911. That assurance was that legislation would be introduced, providing that an increase in the cost of labour, due to the improvement of the conditions of employees, should be considered a valid justification for a reasonable increase of rates. The North Staffordshire Chamber of Commerce was represented at a meeting of the Standing Joint Committee of Midland Chambers of Commerce, held at Birmingham on Dec. 12, when the Bill was very fully discussed. The general feeling was that the proposals were so detrimental to the trading community that the Committee were unable to accept them. It was also stated that these proposals went very much further than the pledge given by the Government, and that their enactment would effectively nullify in a most important respect the protection given as a result of a great national agitation and at enormous cost in 1894, when the Railway and Canal Traffic Act was passed, in order to place some limitation upon the power of the Railway companies to increase rates at will. The Bill provides that the Railway and Canal Commissioners shall treat an increase of rate or charge as justified where the railway company proves to their satisfaction that there has been a rise in the cost of working resulting from improved conditions of employment of their staff since the date of the strike settlement; that the whole of the increase of rate is to meet the rise in cost of working; that the increase of rate is not greater than reasonably required for the purpose; and that the proportion of increase of rate allocated to a particular traffic is not unreasonable.

The Committee decided to address a letter to the President of the Board of Trade, suggesting that the Railway and Canal Commissioners, in determining the reasonableness or otherwise of any increase of rate, should have regard to any net increase of the railway company's expenditure due to improving the conditions of their employees; to any net increase or decrease of the cost of performing the services for which the rate was imposed; and to any other matter which may have affected the net earning power of the company, in respect of the services for which such rate was imposed. Local members of Parliament are to be asked through the Chambers of Commerce to support these proposals.——The North Staffordshire Chamber of Commerce was also represented at a meeting held in Birmingham on the same day of the Midland Waterways Association Executive Committee. A subcommittee was appointed to enter into communication with a number of members of Parliament, who had suggested the formation of a party in the House of Commons on non-political lines pledged to use their best endeavours to secure legislation on the subject, with a view to the organisation of such a party. Meanwhile the North Staffordshire and Cheshire scheme is still under consideration, the last step taken being the appointment of Mr. J. A. Saner, the engineer to the Weaver Navigation, and Mr. M. Curbishley, the engineer to the Trent and Mersey Navigation, to prepare a report on the approximate cost of widening the Trent and Mersey Canal sufficiently to meet the requirements of boats of 100 tons capacity, and also on the probability of increased traffic resulting from such a scheme.

The North Staffordshire branch of the United Kingdom Commercial Travellers' Association, whose members are, of course, chiefly concerned in the potting trade, had an enjoyable gathering at the Grand Hotel, Hanley, on Dec. 13, on the occasion of their annual dinner. The chair was occupied by Mr. W. Rhodes (president), a considerable attendance also including Mr. T. E. Bamber (chairman), Mr. J. F. Wiltshaw (vice-chairman), and Mr. S. Oulsnam (secretary). The branch has been in existence for twenty-one years, and reference was made in the course of the speeches to the useful functions it is performing. Mr. Bamber referred to the completion during the year of the Cope Memorial, the branch having presented Mrs. Cope with the house in which she lived as a token of the very high esteem in which their late secretary was held. The greater part of the year had been occupied by the formation of an unemployment and mortuary benefit scheme, which they hoped to bring to a successful issue. This would relieve the local benevolent fund in a great measure, but there would still be a great service for it

to perform. Other speakers spoke of the admirable work being carried on by the Commercial Travellers' Schools and the Benevolent Institution, and regarding the commercial side of the Association, Mr. T. Grainger (ex-chairman of the U.K.C.T.A.) observed that for many years it had been a reproach that this country had not been able to provide travellers for positions abroad because of the want of knowledge of foreign languages. The Association was, however, trying to remedy that by the institution of classes in different parts of the country. Local trade topics were touched upon by the President, who said that during the year they had higher prices for pottery ware, and he saw no reason why the present rates should not be maintained. That rested largely with the travellers. In his opinion, the cost of raw materials, and particularly fuel, had risen to such an extent that it would be impossible to return to the rates which obtained prior to the year. Goods were still worth more than was being asked for them, and manufacturers would not be able to ascertain definitely whether they were on safe ground until the balance sheets had been prepared.

Mr. Edmund Leigh, J.P., of the firm of Burgess & Leigh, Burslem, left during the second week in December for a voyage to Australia. Mr. Leigh has been in ill health for a considerable time, though much better of late, and his trip has been undertaken chiefly on the grounds of his indisposition. His wide circle of business and personal friends will join in the hope that he will have a healthful and pleasurable voyage out and home again, and that he will return to business next year fully restored to strength and vigour.——There was a large gathering of local public men and manufacturers at Longton on Dec. 17, when Mr. George Bennion, who has been four times Mayor of that town, was entertained to a complimentary dinner and presented with his portrait painted by Mr. Ellis Roberts. Mr. Bennion has rendered signal service to the town of Longton for a long series of years; he was first elected Mayor in 1879, and was re-elected in 1900, 1901 and 1902. ——Mr. C. R. Pendock has commenced his duties in North Staffs. as H.M. Factory Inspector in succession to Mr. S. Shuter.——The North Staffordshire Chamber of Commerce have issued "The Commercial Year Book." It is edited by Mr. A. P. Llewellyn, and contains many particulars of local interest and references to pottery manufacturers. The book is sumptuously produced by Bemrose, Ltd., of Derby and London.——[As we go to press (Dec. 30) a wire is to hand from the Secretary of the English China Manufacturers' Association, saying that they are considering a further increase in selling prices at their meeting on Dec. 31, on account of the increased cost of all potters' materials, referred to earlier in these Notes.—EDS. P. G.]

An inquest, which was the subject subsequently of questions in the House of Commons, was held at Stoke Workhouse on Dec. 2, relative to the death of a glost placer named John Piper, aged 47, which had taken place in that institution. The verdict was that death was due to nephritis, but that there was not sufficient evidence to show that it was set up by working in lead. The point however, which arose at the inquiry was as to whether the man had been medically examined. He was a casual worker, and had been employed occasionally as a glost placer for four or five years previous to Dec., 1911, by a Longton firm of china manufacturers. During that time, the head glost placer stated, the deceased had never produced, nor had the witness seen, his casual lead workers' book showing whether he had been examined. He had never asked for it because he expected him to go with the others to be medically examined. When he asked the deceased to go with the others, he said it was all right; he had already passed the doctor. A member of the firm said he knew the deceased had worked casually in the lead, but he could not say whether he had been put down in the books for insurance as a lead worker. He never saw his book and never asked for it, as it was not his duty to do so. The Coroner said it would appear in this particular case that the rules had not been carried out. Nobody seemed to accept any responsibility for inspecting the books of these casual workers. Here was a man who, according to the evidence, had been working in lead for five years, during the whole of which period it was possible he might not have been examined at all. In this case the rules had been absolutely ignored. When the matter was referred to in the Commons, Mr. Ellis Griffith (Under-Secretary for the Home Office), replying to Mr. Hills, said the firm by whom the man was last employed had been severely cautioned. As the man had not been employed in a lead process since 1911, it was not now possible to take proceedings.——Another coroner's inquiry was held at Stoke on Dec. 11, when a verdict was returned that George Hill, aged 48, a potter's dipper, had died on Dec. 3 from kidney disease set up by working in lead processes. He had been a lead worker for 27 years, was taken ill two years ago, but recovered, and worked until Nov. 16, when he again became ill, and was found to be suffering from wrist drop in both wrists and other symptoms of plumbism.

THE STOURBRIDGE, BIRMINGHAM, AND NORTH OF ENGLAND GLASS TRADES.

(FROM OUR OWN CORRESPONDENT.)

BEFORE reporting upon the condition of the glass trades during the period that has elapsed since the publication of our last article, something may properly be said about its state in the year just concluded. The previous twelve months had been fairly prosperous in certain branches—the most artistic, in the highest quality of flint goods, and the least so, in the commonest and cheapest of small bottles. The general tableware trade has fluctuated, short terms of briskness being followed by slack times of greater duration, and certain branches of manufacture, as, for instance, that of lamps and chimneys, almost destroyed.

During 1912, as in the preceding year, there was a demand from the Continent, from London, and our chief provincial cities, as well as far away India and Australia, for the best productions in cut and engraved crystal, and though at the time of writing there is a falling off in the call for the highest productions in the arts of the glass-maker and the cutter, our Midland firms are fairly sanguine that there will be a revival in the spring, if not earlier. The makers of green and black bottles have had a fairly good time, especially since the beginning of May, and, as will be known, they are reaping the advantage of higher rates of pay than had previously been in operation. This through a combination in which masters and men have taken part, and which has secured better prices from the former's customers at home and abroad.

With regard to the work of the last two months, we have to report that business in flint, including pressed glass, exhibits an improving tendency. Of course just before Christmas there was a falling off in orders, but not more than has always been experienced in the last two or three weeks of each year, and it is hoped that there would be a return to full activity by the time the present month runs out, or in any case by the end of February. The boom in the general industries of the kingdom—a most remarkable one when it is borne in mind what an evil influence labour unrest has had in certain great industrial districts—has reacted on the glass

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FRANCO-BRITISH EXHIBITION, LONDON, 1908.—MEMBERS OF JURY (HORS CONCOURS)

BROWN GOLD. LUSTRE COLOURS.

TRADE MARK.

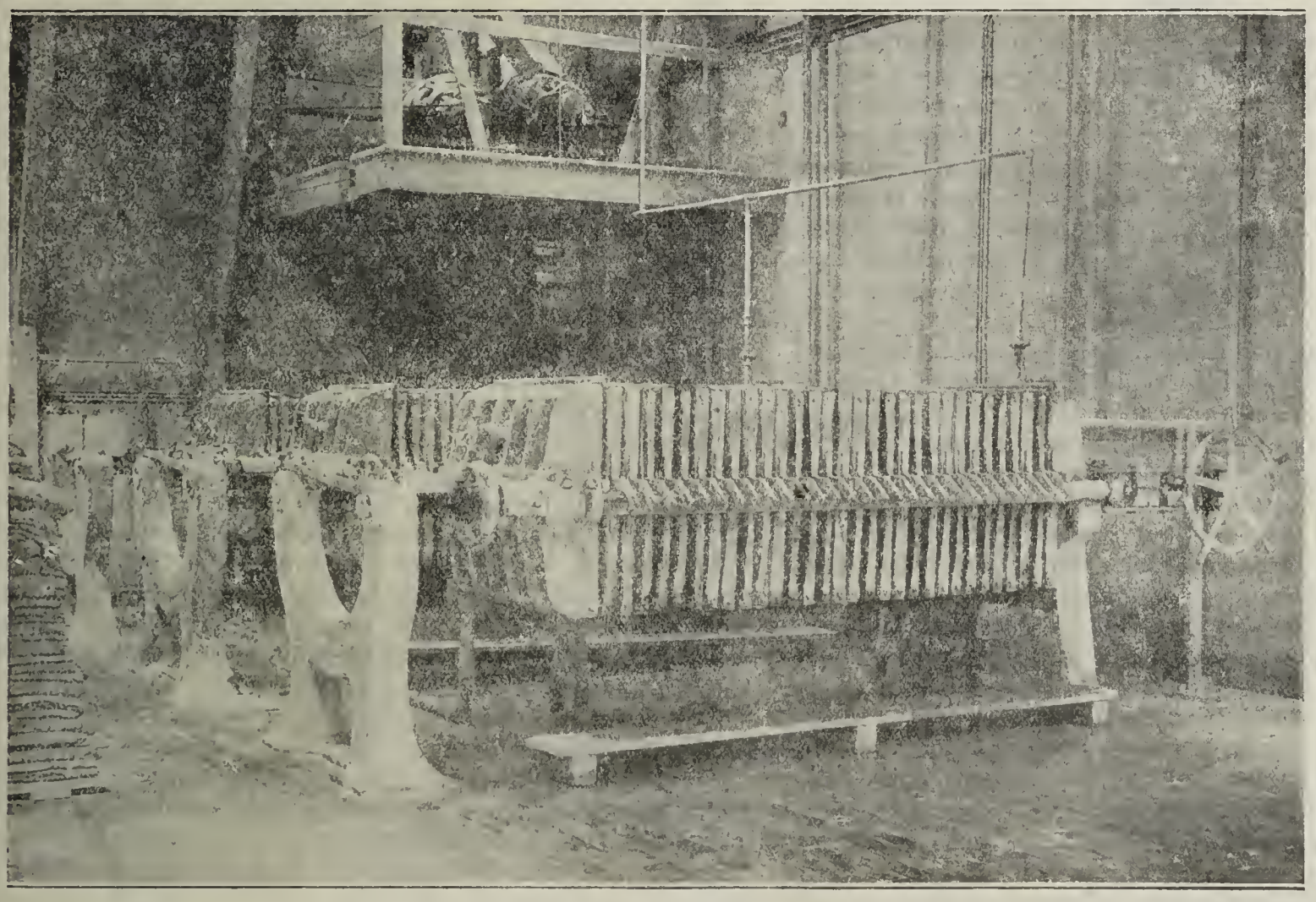
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trade, and largely on that of the Stourbridge and Wordsley district, the articles ordered by merchants and other customers being of greater value generally than in most previous winter seasons. The improvement has been most marked during the past four months, and mainly confined to the home markets, shipping orders showing but little change. Beautiful table ware in wines, clarets, champagnes, and bowls, &c., have been produced, along with richly cut decanters, spirit bottles, and epergnes, these latter being more in request than was the case a year or two ago. The best pressed dishes have had a good run, and are still in demand, along with tumblers and licensed victuallers' glass of the best makes. The flower-vase trade, in the cultivation of which much taste and skill are so evident in designer and workman, has not shown the activity manufacturers had expected. But briskness cannot long be delayed.

The Birmingham silversmiths and electro-platers have of late been good customers for richly cut dishes, biscuit jars, and other articles required for mounting purposes, but the goods supplied from the glassworks of the Midlands are hardly a tithe of those used by Birmingham and Sheffield firms. The great bulk of this glassware comes from abroad, much of it in what may be termed a rough state, and is cut and otherwise adorned either on the premises of the Birmingham silversmith, or by cutters having their own workshops, rented on the room-and-power system. The glass manufacturers of the city are all busy.

The flint glass trade in Manchester is brisk, and has been so for some time, the demand being largely for household purposes, and including fancy articles in crystal and coloured metal, the manufacture of which in this district is carried on with distinct success, owing largely to the attention given to artistic shapes and the proper shades of contrasting colours. The table ware produced is high in class, the best of it, and there is no falling off in quality in pressed goods, the range of which is very considerable. One great difficulty manufacturers have to meet is the very high prices of fuel—coal and coke—the rates demanded for the latter being almost prohibitive. Machinery glassmakers are very busy, and present prospects are reported to be most encouraging. The glass bottle trade is brisk, and manufacturers expect it to remain so for some weeks. The system of "cutting" prices for steam tubing, and which is reported to have a Scottish origin, is causing annoyance in the Lancashire houses.

In St. Helens there is much activity in almost all branches of the trade. The manufacture of plate glass is steadily pursued at the one large works which overshadows all others in the kingdom. The Continental convention, after negotiations in Belgium, it seems, is to be renewed, and to extend until August, 1924. In addition a trust is being formed, and it is publicly stated that negotiations have been entered into with the proprietors of the great works here with the view to a limitation of output. As to the trust, it is claimed that by its formation there will be a "complete suppression of all competition, not only as regards prices and conditions of sale, but also as to the conditions of packing and the quality of plate glass." During the past two months there has been a good demand for German sheet glass. Flatteners and benders have plenty of work. In the bottle houses there is great activity. Orders from Liverpool have been large, both on home and export account. At Warrington the flint glass trade keeps up well, both in the class of goods made and the quality of the metal.

Turning to South and West Yorkshire, the chief seat of the bottle trade in all its branches, we have to report a satisfactory state of things generally. At Stairfoot the output continues very large, and the same is the case at other places as a rule. In Knottingley the manufacture of jars by machine has fallen off a little, but it has been more than made up by the demand for bottles. There is activity at Castleford, Wakefield, Thornhill Lees, and Hunslet. So far the new arrangement with the masters is working well, and the men are getting better payment than they received under the old system. The report of the Parliamentary Departmental Committee on the night employment of boys in factories and workshops, issued on the 3rd ult., has aroused the attention of glass manufacturers all over the United Kingdom. The Committee have come to a number of "general conclusions," the most important to firms with which we are concerned being that the employment of boys under 18 years of age at night "ought not to be allowed to any great extent or at any earlier age than is absolutely necessary." They make a recommendation in accordance with that. One member of the Committee, Mr. Astor, M.P., in a memorandum, says the recommendation should not be carried out in respect of glassworks and iron mills "until it has been shown that the trades can stand, in the face of foreign competition, the increased cost of competition," &c. The Committee, dealing with the glass trade, suggest that the age of boys for night work should be raised to 15 years now, and to 16 years in 1916. There is time, therefore, for consideration on the part of glass manufacturers, against whom, owing to our fiscal system, the pressure of foreign competition is exceedingly great. It may be named in this connection that it is not always possible to get suitable boys, many parents objecting to them working in the night time, and what have been termed handsome wages have to be paid to the lads. The medical branch gives employment to many, for instance at Rotherham, but the bulk are engaged in heavier work at the ordinary bottle houses where goods are made for beer bottles and mineral water manufacturers, as well as jars, &c., for fruit preservers, &c.

At York city business is brisk, and has been so for some time, both in the flint and the bottle houses. In the former fine table ware continues to be produced, both cut and pressed, the purity of the metal being well maintained. Owing to the low prices generally ruling for tubing, not much has been drawn of late, but the quality is always of the best, and customers know that bottle makers are kept well employed, and there is every prospect of an early and brisk spring season. For medicals about an ordinary demand has been experienced.

In the Newcastle and Sunderland district there was much activity both in the flint glass and the bottle houses in November. Cutters were busier than they had been for some time, and round the furnaces much the same state of things existed, and there was every prospect of undisturbed prosperity during the month just concluded, but suddenly, and without the consent of the leaders in their trade union, some thousands of the servants of the North-Eastern Railway Co. struck work, with the result that not only the glass trade, but every other suffered. Into the merits of the dispute the strikers had with their employers this is not the place to enter, and suffice it to say that many glass manufacturers, indeed we may say all, suffered much loss through their supplies of coal being restricted, a few only being able to obtain the full quantity of fuel required to keep their furnaces going. Happily, the strike is at an end, but business received a check from which it will take a few weeks to recover. The Christmas demand for flint, mule, and pressed glassware was more active than usual. Bottle makers, but for the incident mentioned, would have had a satisfactory time. In connection with this branch of the trade it may

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be stated that a law suit, in which L. Clegg & Sons, aerated water manufacturers, of Gateshead, Tyne Dock, and Sunderland, sued Mr. J. Wilkinson and his trustee, Mr. Armstrong, and engaged in a similar business in the first-named town, to recover £100 damages, it being alleged that thousands of their bottles had been wilfully smashed by defendants' workmen. The case was heard in the Newcastle County Court; it excited widespread interest, and was remarkable for the conflict of testimony. It resulted in a verdict for the defendants with costs, the judge saying there was no reflection on Mr. Wilkinson, and at the same time he considered Messrs. Clegg quite justified in bringing the action.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

DECEMBER, though ushering in the annual festive season in Scotland, has proved unpropitious to a very marked degree. From the advent of the month the weather has continued of the worst possible kind for shopping. Putting off has been the general rule, for out-of-door conditions have been most unpromising. There has been a great variety, in a sense, but violence has ruled always. High winds, torrential rainfall, frost, snow, bitter cold at times, now and again varied by unseasonable and undesirable mildness, through these the month has worn its way towards the end, with, at the present moment of writing (a day or two short of Christmas), no sign of any settlement. Our trades have suffered very much from these persistent conditions, as may easily be imagined. There has been a number of special clearing out sales in the cities and towns, with much of attraction in the way of display and also of written-down price figures; but results, owing to the causes mentioned, have been unsatisfactory.

As usual, up to the present, a great amount of work has been accomplished in the setting out of windows and showrooms for the short-lived Christmas and New Year observances. Some of these displays are very meritorious, and, of course, the ends aimed at by the proprietors are being attained in some degree at least. A certain amount of purchasing has been experienced, but there would have been very much more if the weather had proved seasonable even though cold. The closing days of the month are yet to come, and in the interests of our industries (of the retail section) it is sincerely to be hoped that better meteorological conditions will prevail during their short run.

In the early part of the month the wholesale merchants in the china, earthenware, and glass trades had their travellers out over the country after the last of the end-of-the-year orders; but these were terribly handicapped by the incessant storms, and had to make tracks for headquarters much sooner than they would have done otherwise. Results in this section have likewise been unsatisfactory, but the men did the best possible under the circumstances. The wholesale merchants for the past week or two have been very generally busy with the annual stocktaking preparatory to the balancing which comes a little later, and which, at present, is not expected to turn out very brightly. The old hindrance of delay in the execution of orders by the makers is, we find, still too much in evidence; but it is ascertained that improvement is going on, although at an exasperatingly slow rate. Probably early in 1913 the normal condition of comparative regularity and punctuality may have been restored.

The glass bottle and other kindred glass goods makers have, during December, been for the most part working at high pressure, but are still somewhat in arrear. This section has done fairly well during the present time of annual push, and would have done even better if prompt deliveries could have been assured. There are no further price changes to be noted in the glass section, nor any in the general lines of pottery, the recent advances, however, having apparently made good their standing and warrant.

As regards strikes in Scotland (always so hurtful to our sensitive trades) the country is not at all clear of them, and some new ones are under threat at present, but the situation in this respect has often been worse by a great deal. Within one of the West of Scotland potteries, a few weeks ago, there was a disturbance of the kind, and some 400 workers were out; but settlement was quickly arrived at, and the danger is off in the meantime. One of the Glasgow glass bottle factories was in some difficulty a little while ago, and stoppage was not unlooked for, but production has continued uninterrupted up to the present, and no doubt some workable arrangment has been arrived at.

The Gazette.

Dissolutions of Partnership.

NOTE.—*When two dates are given in the following announcement the first is the date of the dissolution. The date in parentheses that of the official advertisement.*

ACTON J. & SONS (Geo. Acton, Joseph Acton, and Hy. Acton), Cawthorne, near Barnsley, brick and pipemakers. Oct. 31, so far as concerns G. and J. Acton, who retire. (Nov. 26.)

DUCKWORTH T. & R. (Grimshaw Holding & Jno. Duckworth), Broughton Barn Potteries, Oswaldtwistle, earthenware manufacturers. Oct. 21, 1911. Debts by G. Holding. (Dec. 13.)

HARTLEY, WOOD & Co. (Alf. Wood and Alf. Jno. Wood), Portobello Glass Works, Sunderland, coloured glass manufacturers. Dec. 31, 1911. The business will in future be carried on by A. J. Wood and Gilbert Hy. Wood, as Hartley, Wood & Co. (Nov. 26.)

JAMES & REID (Percy Challinor James & Stuart Wemyss Reid), 13, Godstall-chambers, Chester, brick and tile merchants. Oct. 31. Debts by S. W. Reid. (Dec. 13.)

SNOWDON, C. E. & Co. (Geo. Spraggon Pollock, Maud Snowdon, & Wm. Lisle Pattison), Bridge Pottery and Monkwearmouth Pottery, Sunderland, earthenware manufacturers and dealers. Oct. 31. Debts by G. S. Pollock and M. Snowdon, who continue. (Nov. 19.)

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

BILTONS, LTD. (Old Co.), Stoke-on-Trent. C. E. Bullock ceased to act as receiver Nov. 22.

CAULDON (BROWN-WESTHEAD, MOORE & Co.), LTD., Stoke-on-Trent. F. T. Woolley ceased to act as receiver Nov. 28.

MERSEY POTTERY & TILE CO., LTD., Tunstall. B. Kidson ceased to act as receiver Nov. 30.

NORMAN & COLCLOUGH, LTD. Resolved Dec. 20:—That the company be wound up. F. Geen, Stoke-on-Trent, C.A., liqr.

Notices of Intended Dividends.

GODWIN AUSTIN F. (separate estate), Goode Reste, Lugwardine, near Hereford, encaustic tile manufacturer. Claims to T. W. Meats, 39, Broad-st., Hereford.

GODWIN WM. H. and AUSTIN F. GODWIN, trading as Wm. Godwin & Son, Lugwardine Works, Withington, encaustic tile manufacturers. Claims to T. W. Meats, 39, Broad-st., Hereford.

THE NORTH CORNWALL CHINA CLAY COMPANY, LTD.

READERS of The Pottery Gazette are quite familiar with the great china clay industry of Cornwall, and what it has done for the town and district of St. Austell. In the accompanying pages, however, the remarkable progress of the North Cornwall China Clay Company should prove exceptionally interesting. The preparation of china clay for the Pot eries is of such absorbing interest, even to the uninitiated, that a brief geological reference may be pardonable. "Kaolin," as china clay is technically known, is a name first given by the Chinese to a pure white clay used by them in the manufacture of porcelain, and geologists are unanimous in the opinion that "Kaolin" wherever found is the result of the decomposition of granitic rock. Our first illustration is of the gorse naturally studded with numerous granite hut-circled stones which surrounds the North Cornwall China Clay Works, and which proves conclusively, even from the surface, an abundance of this igneous crystalline rock. There are similar clays, differing slightly in colour and also in percentage of constituents, found in various parts of the world, but the source of supply for the British Potteries is derived from the County of Cornwall. The initial stages of separation of the plastic clay from its derivation is due to the natural action for untold ages of atmospheric agencies combined with the percolation of waters charged with carbonic and fluoric acids. In low and marshy lands it is found to have accumulated to immense depths, but rarely over large areas. The Stannon Moor, deposit, which is being developed, is one of the largest known in the county. Ten to twenty acres are generally considered to be large works, but the Stannon Moor pits have been extended over an expansive area of 200 acres to a uniform depth of many hundred feet. They are situated at the foot of Rough Tor, which rises to an altitude of 1,296 feet above the sea level, and adjacent to Brown Willy, the highest hill in the county. As will be seen, the pits now resemble a huge gleaming white crater, so far below the surface of the moorland that the men engaged in washing down its sides look like ants toiling along the precipitous glands. In the process of washing an abundance of spring water is essential, but there is an unlimited supply, as clear as crystal, which is directed over the sides of the pits by hydrants. The water becomes impregnated with the clay and other constituents, and in its course to the bottom carries with it immense quantities of sand. The sand is allowed to settle, whilst the clay is carried on suspended in its liquid form to the shafts; thence it is pumped up to the surface by powerful engines. The waste sand is loaded into small tram wagons, which are mechanically drawn to the high sand heaps on the surface, which are of such peculiar interest to many Cornish landscapes. The liquid clay flows along a series of channels called "micas," where it passes through a copper gauze of a most minute mesh—250 holes to the square inch, whilst at the end another gauze is stretched with 3,000 holes to the square inch. The purified clay, as seen in the accompanying photograph of the settling pits, is sufficiently cleansed to gratify the most fastidious purchaser, but there are more stages in its preparation ere it is sold to him by the company. The clay quickly settles in those pits where it is conveyed for a brief rest. It is subsequently conveyed in its liquid state through earthenware pipes to the final reservoirs adjoining the



The Granite Moor and Source of Clay, Illustrating the Hut Circle Stones and the North Cornwall China Clay Works in the Distance.



Washing the Clay: Showing Use of Hydrant.

(Continued on page 97.

WOODFIELD EDWD., the Pottery, Harborough-rd., Kibworth Beauchamp, flower and chimney pot manufacturer. Claims to E. Barlow, Leicester, O.R.

Notice under Assignment, &c.

YOUNG ANTHONY R., trading as Levy & Young, 2, Eastfield-rd., Cotham, Bristol, and 139, Victoria-st., Bristol, wholesale glass merchant. Claims to W. H. Crocker, 20, Pearl-buildings, Portsmouth.

Estate Sequestrated.

CRAWFORD THOMAS, Cruggleton House, Garlieston, tile manufacturer. Assets: Book debts, £14 18s. 4d.; stock-in-trade, £72 19s. 6d.; machinery, cost about £250; rent of cottage, £2; total, £339 17s. 10d. The following are creditors:—John Wright & Co., Dumfries, £7 17s. 10d.; D. B. Shaw, Garlieston, £10 11s.; M'Clure & Robertson, Garlieston, £10; Mr. Shearer, Garlieston, £1 1s.; Mr. Gulline, Garlieston, £2; Captain Belford, Gatehouse, £20; J. Crawford, Glasgow, £112; Mr. Smith, Kirkinner, £10 10s.; Alex. S. Morton, Newton Stewart, £100; Mr. Thomson, Newton Stewart, £60; C. Breckenridge, Newton Stewart, £2 15s.; T. M'Creath, Newton Stewart, £15; Mr. Drape, Whithorn, £18 18s. 1d.; preferential creditors (rent), £45: total liabilities, £415 12s. 11d.

Notices of Dividends.

KEARNS MARY (married woman), 66, Chancery-st., Dublin, wholesale delph and glass merchant. First and final, of 4s. 0⅝d. in the £. O.A., A. G. Hollinshead.

WALTERS DAVID M., Corner-house, Glanamman, china dealer. First and final, 1s. 10¾d. at O.R.'s, Carmarthen.

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.

** These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

(The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—EDS. P.G.)

POTTER THOS., Clarendon Works, Heathcote-rd., Longton, and 1, Short Cobden-st., Dresden, commission agent. Dated, Nov. 15. Filed, Nov. 20. Liabilities unsecured, £171. Property, after deducting secured claims, £82. Tr., E. J. Kent, Market-st., Longton. The following are creditors:—Dennis & Co., Fenton, £4; Hill & Co., Longton, £27; Ratcliffe & Co., Longton, £20; Shore & Coggins, Longton, £19; H. Aynsley & Co., Longton, £11; Royal Art Pottery Co., Longton, £10; J. Bromley, Longton, £9; H. J. Colclough, Longton, £7; A. E. Jones & Co., Longton, £7; J. Peake, Longton, £6; J. W. Beswick, Longton, £5; Proctor, Sons & Ratcliffe, Longton, £3; J. Mason, Stoke, £5; W. Martin (rent), £12.

WEBSTER RCHD., 2, Clifton-st., Bolton, earthenware dealer. Composition of 12s. in the £. to be provided for by payment to the trustee of weekly instalments of 8s., commencing Dec. 2, 1912; secured by an assignment upon trust, &c. The trustee to pay to the creditors respectively entitled thereto after deduction of costs the amount in his hands at the expiration of 12 months from Dec. 1, 1912, and thereafter half-yearly. Dated, Nov. 29. Filed, Nov. 30. Liabilities unsecured, £125. Property, after deducting secured claims, £25. Tr., R. H. Murray, 8, Bowkers-row, Bolton. The following are creditors:—A. Scoweroft, Bolton, £60; J. Taylor & Co., Ltd., Bolton, £17; J. W. Tunstall, Bolton, £16; Trusts & Reversions, Ltd., Bolton, £16.

Bankruptcy Proceedings.

GILBERT JAMES, Market-place, Wednesbury, Stafford, china dealer, &c. The adjourned public examination of the above-named debtor was held at the Court House, Lichfield-st., Walsall, on Dec. 18, when the case was declared closed.

MCGAW JNO., 145, North-st., and 121, Shankhill-rd., Belfast, china, glass, and fancy goods merchant. Dec. 2.

RHODES HARRY ERNEST, Blenheim House, Worcester-rd., Malvern Link, Worcester, china dealer. R.O., Dec. 11. Examination, Guildhall, Worcester, Jan. 14 at 2. Adj. Dec. 11. The first meeting of creditors herein was held on Dec. 21 at the Official Receiver's office, 11, Copenhagen-st., Worcester, when the statement of affairs showed liabilities amounting to £114, and a deficiency estimated at £92. The failure was attributed to want of capital, bad trade, and illness of wife. It appeared that the debtor started trading in 1900 at Hay Mills, Birmingham, as a china dealer, with a capital of £20. The business did not prove a success, and after 15 months' trading he discontinued it. He said that all his liabilities, which totalled about £50, were paid. He afterwards worked as an assistant for his brother until March, 1910, when he again commenced business on his own account at Malvern Link. His broher gave him stock to the value of about £10 with which to start, but beyond that he was without capital. He traded for a short time as a hawker, having no shop, but in June, 1910, he took his present shop at Worcester-rd., where he had since carried on business. He stated that he had never made sufficient out of the business to pay the living expenses, and he gradually got behind. He was sued for £22 in June of the present year, on account of which he has since paid £10, but an execution was threatened, and the debtor thereupon filed his petition. The books of account kept were a rough debtors' and creditors' ledger, and an account of the takings at the shop. The matter was left with the Official Receiver.

WILLIAMS JOSEPH ROBT., Brynhyfryd, and The Stores, Penrhyn Bay, Llandudno, late 9, Trefriw-terrace, Trefriw, and Morfan, Wellington-rd., Rhyl, glass and china dealer, &c. R.O. Dec. 12. Adj., Dec. 12. First meeting, Crypt-chambers, Chester, Jan. 1 at 12. Exam., Magistrates' Room, Bangor, Jan. 9 at 12.30.

New British Patents.

The following list has been compiled expressly for "THE POTTERY GAZETTE" by G. F. REDFERN & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patents.

ANTI-FRAUD BOTTLES, No. 26,487.—R. V. Donald. Anti-fraud bottle devices. Nov. 18, 1912.

AUTOMATIC TRANSPORTING APPARATUS, No. 28,092.—G. Chappuy. Automatic transporting apparatus, particularly adapted for transporting glassware in the process of manufacture. Dec. 5, 1912.

BODIES AND COATINGS OF GLASS, No. 28,001.—E. Morf. Method of producing bodies and coatings of glass and other substances. (Con. date Dec. 18, 1911, Germany.) Dec. 4, 1912.

BOTTLE WITH HOLLOW STOPPER, No. 27,131.—A. Zander and W. Mann. Bottle in combination with a hollow stopper. Nov. 25, 1912.

DESSERT STANDS, No. 25,850.—E. H. G. Cox. Dessert stands for table use. Nov. 11, 1912.

DRAIN PIPES, No. 27,836.—F. C. Gill. Drain and like pipes. Nov. 22, 1912.

Continued from page 95.]

kilns. Here the water is drained off, and a white, mobile, cream-like substance, plastic china clay, is trammed into the kilns for drying. The kilns are erected near the railway, greatly facilitating the transmission of the clay to various shipping ports of the world and general inland distribution. With a capital of £75,000, the North Cornwall China Clay Company laid the foundations of a great industry, the plans for the necessary erections, levels, way leaves, and a double run of earthenware pipes to the kilns proved an engineering task of no small magnitude. The developments continued rapidly, necessitating an increase of capital in 1908 to £150,000, and at present the company have the distinction of producing the largest quantity of clay from any single pit in the county, and the quality in the lowest level has exceeded the most sanguine expectations. Since the appointment of Mr. Walter Sessions as general manager, who had been associated with the famous firm of Messrs. Sessions & Sons, Ltd., slate and timber merchants and manufacturers of building materials, of Cardiff, Gloucester, Newport, and London, great and important extensions have been made, largely through his energy and business acumen. The Great Western Railway have given some facilities to the company, and the London & South-Western Railway have not only constructed specially designed wagons for the conveyance of the clay, but are making considerable extensions at Padstow Harbour. The company have been successful in securing contracts from some of the largest consumers in the trade ; and although the output has been more than doubled during the year, they have been unable to cope with the increasing demand. There are five kilns practically completed, each having a capacity of 12,000 tons per annum ; and when the sixth is completed, they will be amongst the largest and best equipped in the world. As an indirect result of the industry, several granite terraces have been built in the village of St. Breward. The company have erected commodious premises, and are shortly contemplating the erection of several houses for their workmen, which has become imperative. What the china clay industry has done for mid Cornwall can be reasonably anticipated for the north of the county. Lady Onslow, wife of the Lord of the Manor, said in "World's Work" that the North Cornwall China Clay Company are working the largest and one of the best setts in the world ; and there is every indication that the highest expectancy will be realised.



The Settling Pits at Stannon Moor.



Some of the Final Reservoirs or Settling Tanks and Drying Kilns at Wenford, adjoining the Railway.

Filter Press Cloths, No. 28,162.—J. S. Heath. Filter press cloths employed in filter presses for dealing with potters' slip or other similar liquid or semi-liquid material. Dec. 6, 1912.

Flower Pot for Orchids. No. 27,744.—T. Pauwels. Flower pot for the cultivation of orchids. Dec. 2, 1912.

Glass Making Furnace, No. 26,031.—G. E. Bateseon and H. A. Bateseon. Glass making furnace. Nov. 13, 1912.

Machines for Making Ridge Tiles, No. 27,317.—H. Preibsch and G. Kohler. Machines for making ridge tiles. Nov. 27, 1912.

Manufacture of Tiles, No. 27,726.—C. A. Cluett. Manufacture of tiles. Dec. 2, 1912.

Non-Refillable Bottles, No. 26,555.—W. Scott. Non-refillable bottles. Nov. 19, 1912.

Non-Refillable Bottle Stoppers, No. 26,741.—W. H. G. Blaney. Non-refillable stoppers for bottles or the like. Nov. 12, 1912.

Plate (Crockery), No. 27,490.—D. V. Gordon. Plate (Crockery). Nov. 29, 1912.

Poison Bottles, No. 25,904.—J. R. Torrance. Poison bottles. Nov. 11, 1912.

Saucers for Flower Pots, Nos. 26,583 and 26,584.—J. L. Major and Paragon Rubber Manufacturing Co., Ltd. Saucers for flower pots. Nov. 19, 1912.

Tile Grading Machines, No. 26,247.—W. K. Achert. Tile grading machines. (Con. date Nov. 21, 1911, U.S.) Nov. 15, 1912.

Tiling, No. 27,527.—F. L. Davis and J. M. Wells. Tiling. Nov. 29, 1912.

Specifications Published.

1911.

24,656.—Zietz. Machines for the manufacture of roof tiles or other similar articles.
24,910.—Schwandt. Drinking vessels.
26,225.—Kadow. Manufacture of blown glass articles.

1912.

14,758.—Speze. Bottles.
17,593.—Denny & Thomas. Non-refillable bottles.
6,830.—Beverley. Means for gathering molten glass.
8,535.—Friedlander & Petri. Stands for cakes, pastry, sandwiches, and the like.

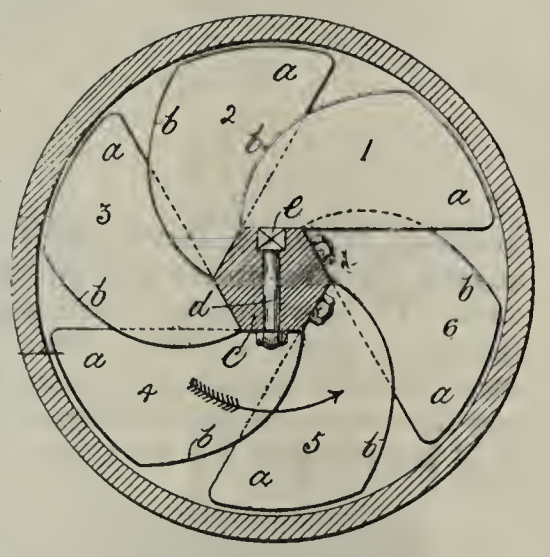
Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

608,679.—A. & A. Crawford, 46-7, Quality-st., Leith.
609,298.—W. M. Homan, 20, Renfrew-st., Glasgow.
609,572.—C. T. Maling & Sons, Newcastle-on-Tyne.
609,740-42.—Holophane, Ltd., 12, Carteret-st., S.W.
609,799.—Burgess & Leigh, Middleport Pottery, Burslem.
609,024.—S. Reich & Co., 15, Clerkenwell-rd., E.C.
609,209.—Burroughs, Wellcome & Co., Snow Hill-bldgs., E.C.
609,299-303.—Weiss & Biheller, 68-71, Chiswell-st., E.C.
609,727.—New Chelsea Porcelain Co., Bagnall-st., Longton.
609,852.—Mintons, Ltd., Stoke-on-Trent.
609,921-2.—Molineaux, Webb & Co., Ltd., Kirby-st., Ancoats, Manchester.
607,764.—P. B. Arch, 24, Norfolk-st., Boston, Lincs.
609,353.—Miss E. L. Hodnett, the Infirmary, East Dulwich-grove, S.E.
609,798 and 609,908.—Butlers, Ltd., Hawkes-st., Smallheath, Birmingham.
609,853.—The New Chelsea Porcelain Co., Longton.
609,854.—W. R. Edwards, 3, Commercial-rd., Gloucester.
609,863.—H. Stanworth and H. Stanworth, Quaker Bridge, Brierfield, Burnley.
609,909 and 609,983.—Peters & Doring, 54, Lower Thames-st., E.C.
610,010-12.—W. H. Goss, Falcon Pottery, Stoke-on-Trent.
610,086.—J. Aynsley & Sons, Portland Works, Longton.
610,136.—Naylor Bros., Denby Dale, near Huddersfield.
610,199.—The International Bottle Co., 108, Fenehurch-st., E.C.
610,200-3.—E. C. Wasdell, 54, Ormond-st., Birmingham.
610,262.—M. Iwanter, 51, Cacilienstrasse, Bern, Switzerland. Address for service, S. Sokal, 14-15, Southampton-buildings, W.C.
610,287.—Grimwades, Ltd., Stoke-on-Trent.
610,288.—W. A. Bailey, 148, Audrey House, Ely-place, E.C.
610,322.—The Crown Staffordshire Porcelain Co., Ltd., Minerva Works, Fenton.
610,380.—Burgess & Leigh, Middleport Pottery, Burslem.
610,381-2.—S. Fielding & Co., Ltd., Stoke-on-Trent.
608,684.—J. Massey & Co., Ltd., Kensington Works, Maghull, Lancs.
609,621.—The North British Rubber Co., Ltd., Castle Mills, Fountainbridge, Edinburgh.
609,923-4.—A. B. Gee. The Cedars, Lebanon-gardens, Biggin-hill, Westerham.
610,383.—A. E. Gray & Co., Ltd., Glebe Works, Mayer-st. Hanley.
610,617.—R. Candlish & Son, Ltd., 17, 18, 19 and 20, Rotherhithe-st., S.E.
610,726-7.—Worcester Royal Porcelain Co., Ltd., Worcester.

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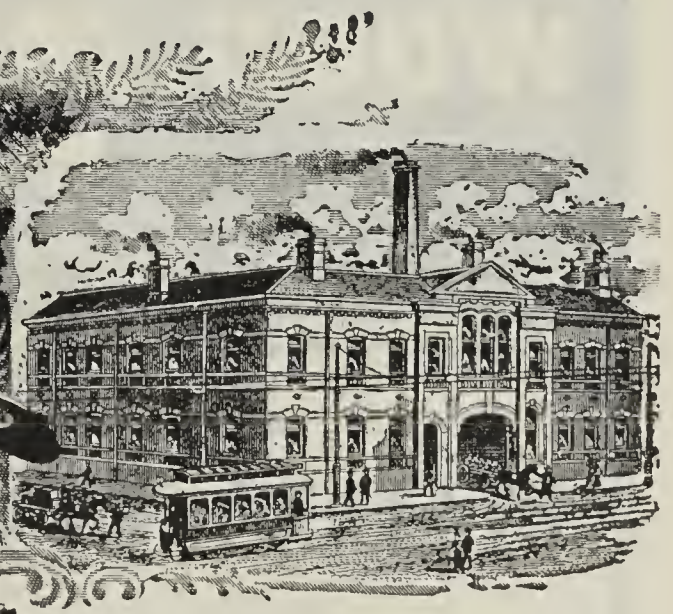
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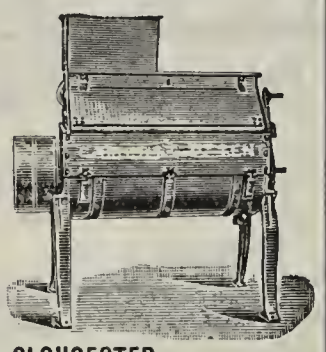
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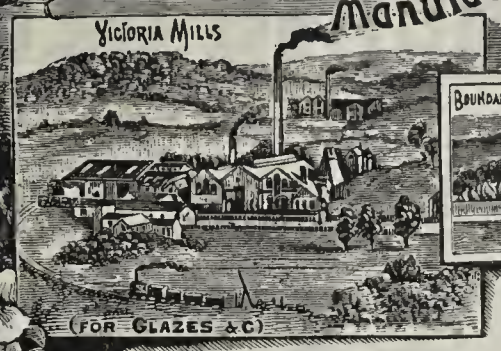
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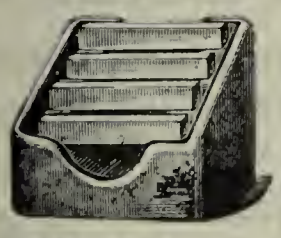
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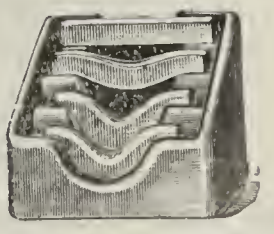


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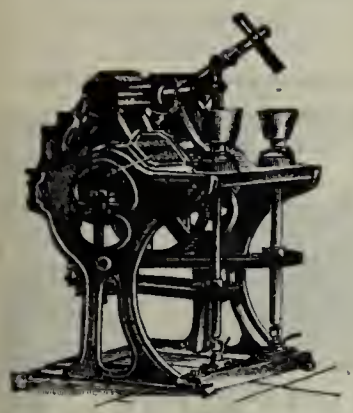
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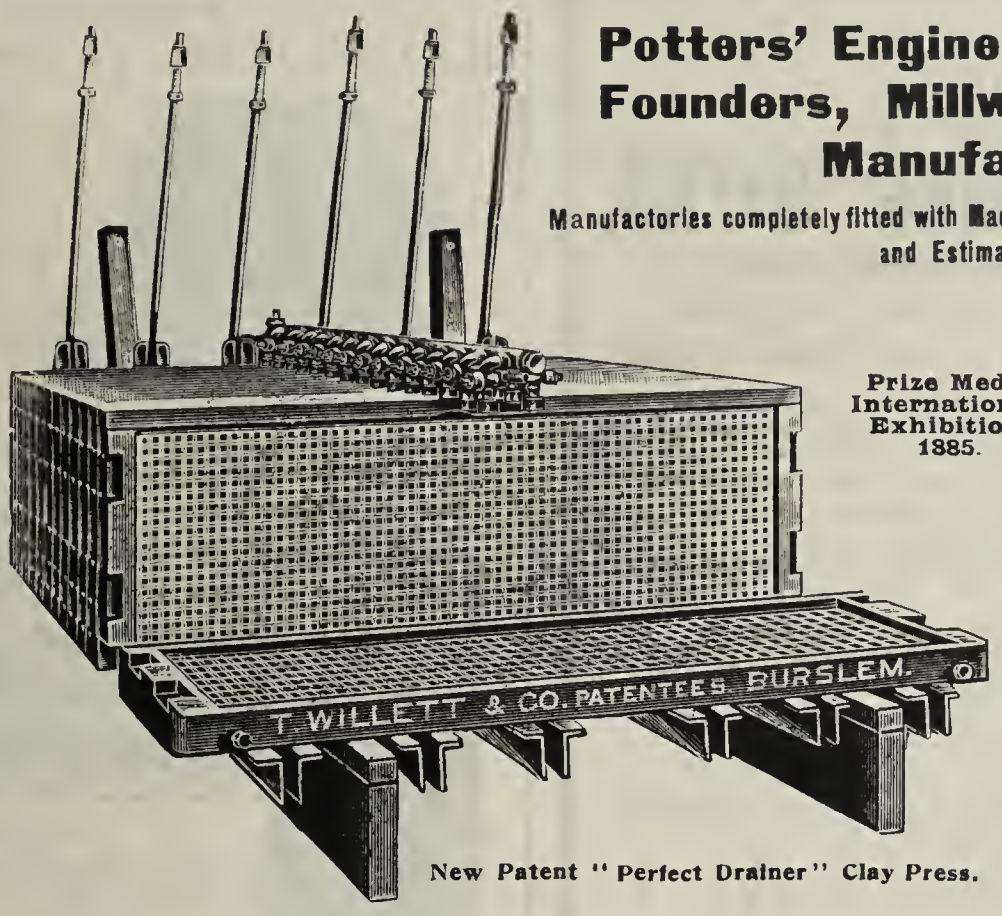
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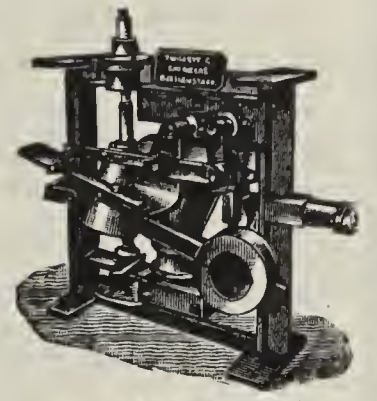


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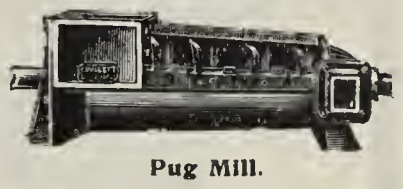


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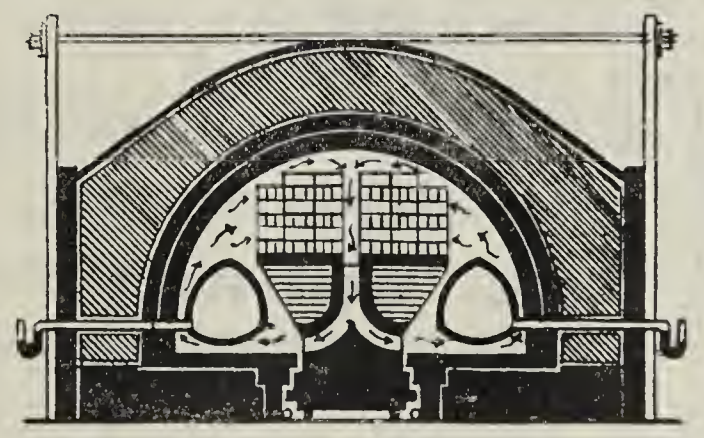
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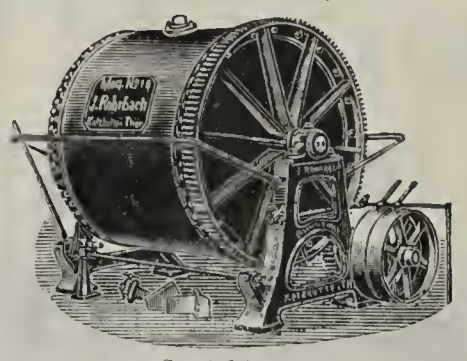
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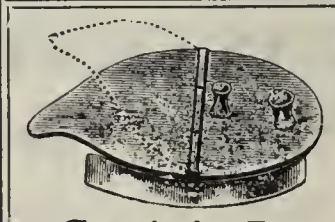
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It is with great pleasure that we testify to the excellence of your Magnetic Separators. As you are aware, we have had them in use for some years, and they continue to give the best results. We shall be glad, as in the past, to allow prospective purchasers to see our installation if you so require.

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In reply to your inquiry of the 1st inst., we are pleased to say that your Magnetic Separators have given us complete satisfaction from the time we fixed them, nearly 4 years ago. Our experience proves them to be the best Separator on the market, the minute particles of Iron that will pass are quite negligible for even the most delicate Pottery Ware.

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Your letter of the 4th inst. The Magnetic Separators you put in for us are working quite satisfactorily and answering the purpose for which we installed them. You may make what use you like of the above remarks, but we are afraid we cannot agree to show our plant to your intending customers.

Fenton, Stoke-on-Trent, June 6th, 1912.

Replying to your letter of the 4th inst., we are pleased to state that the Magnetic Separator you supplied us with about 2 years ago has been in constant work daily, and has done its work very well. It is our intention at an early date to augment the plant, when we propose ordering another machine from you.

M

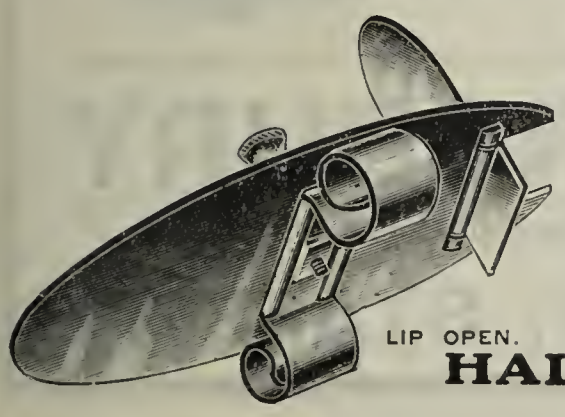
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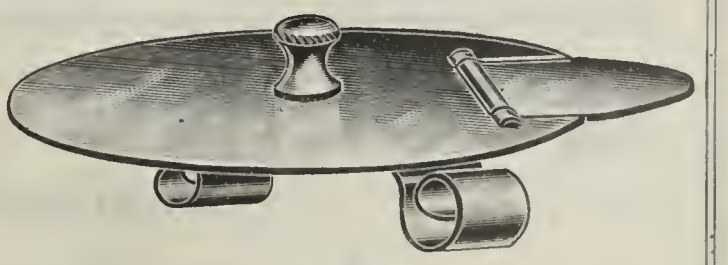
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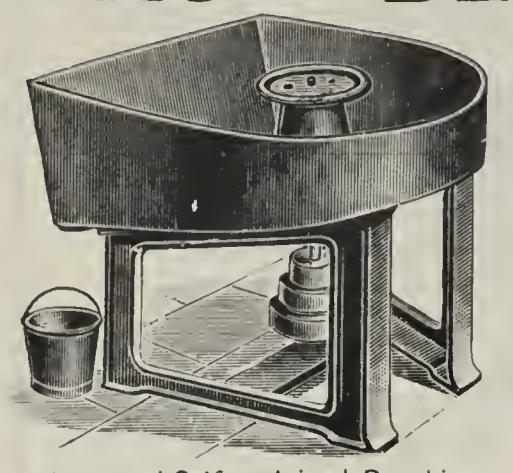
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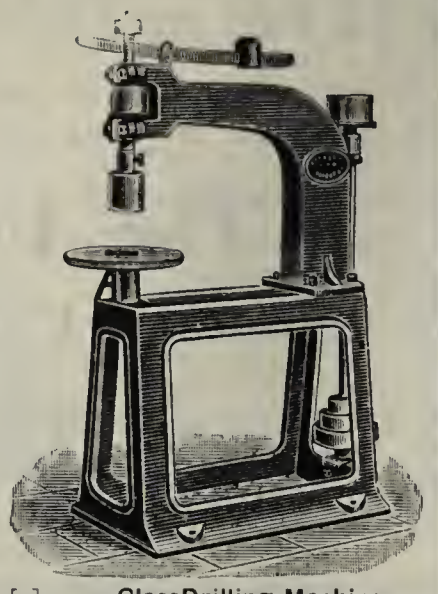
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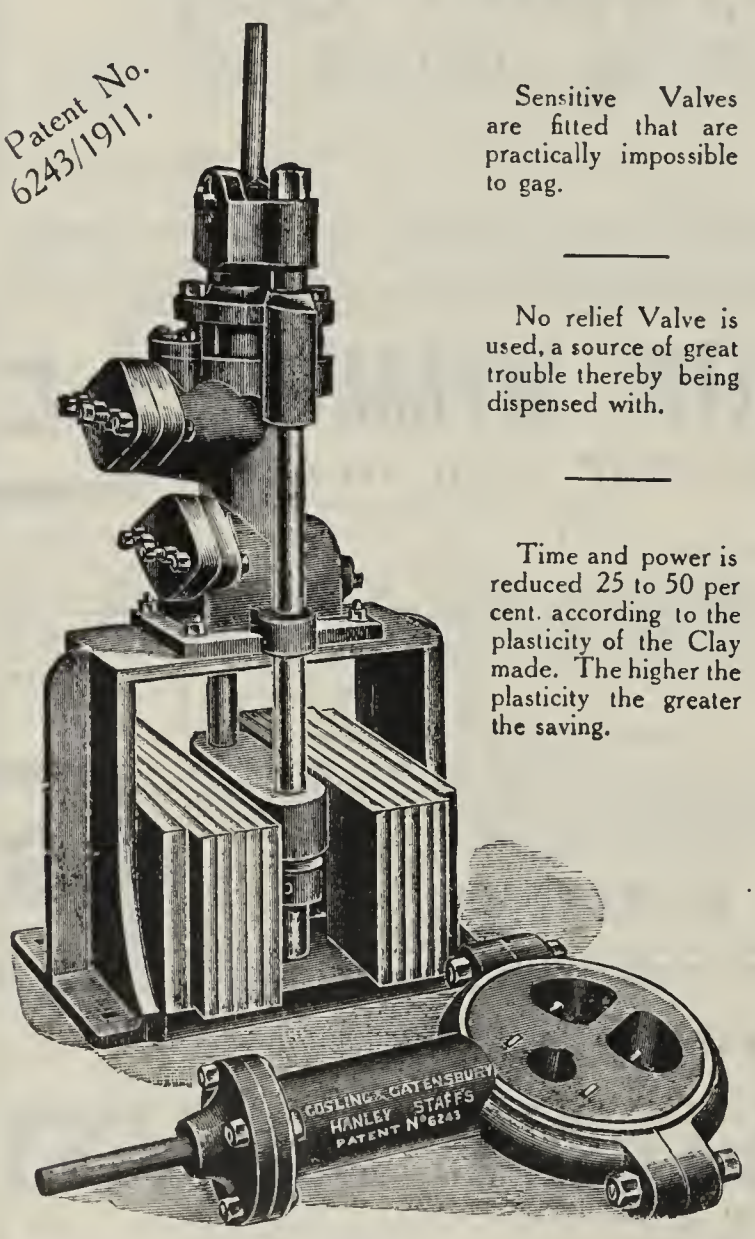
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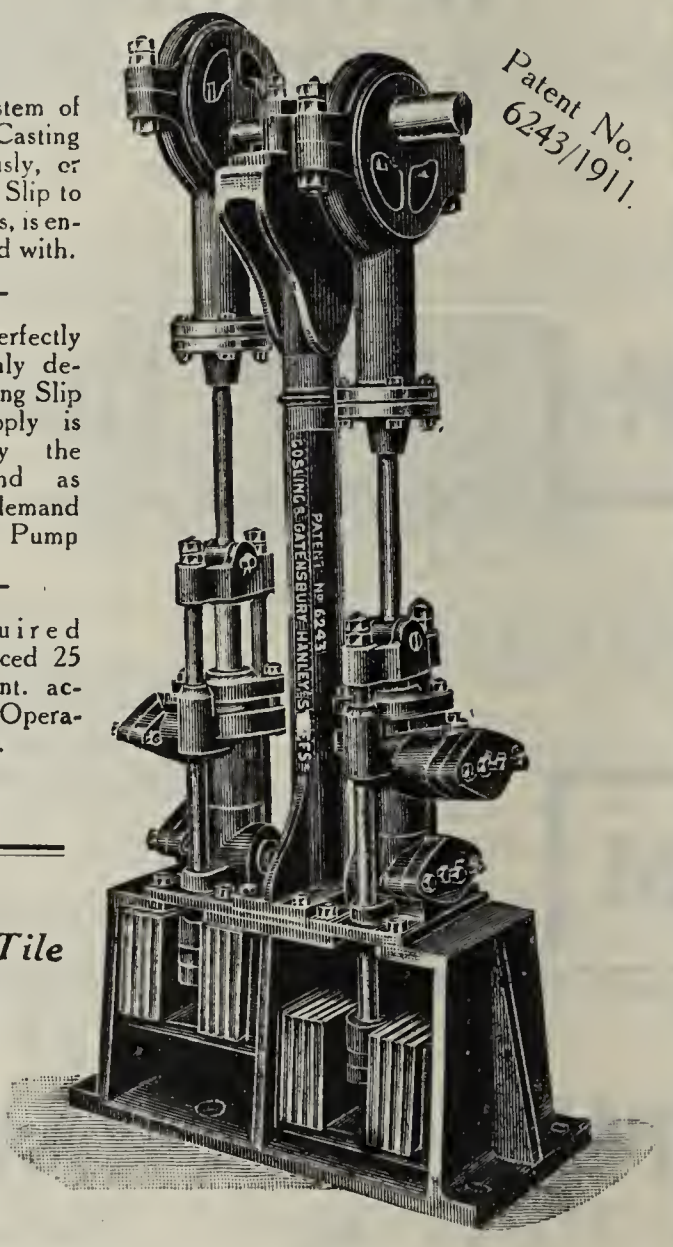
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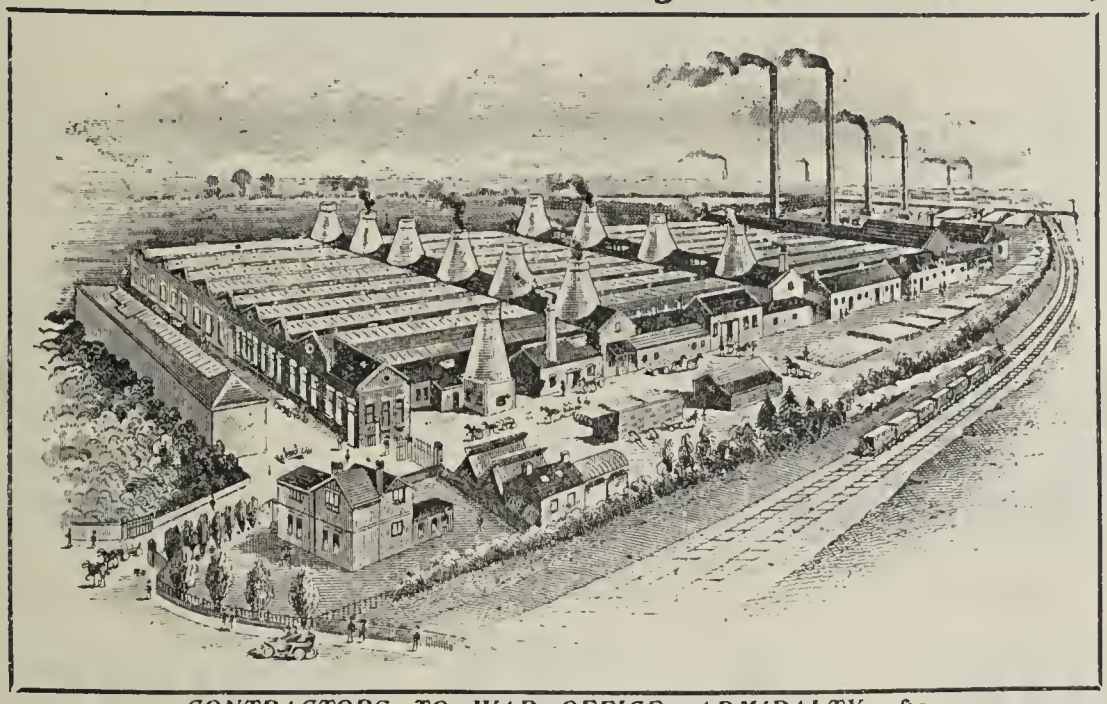
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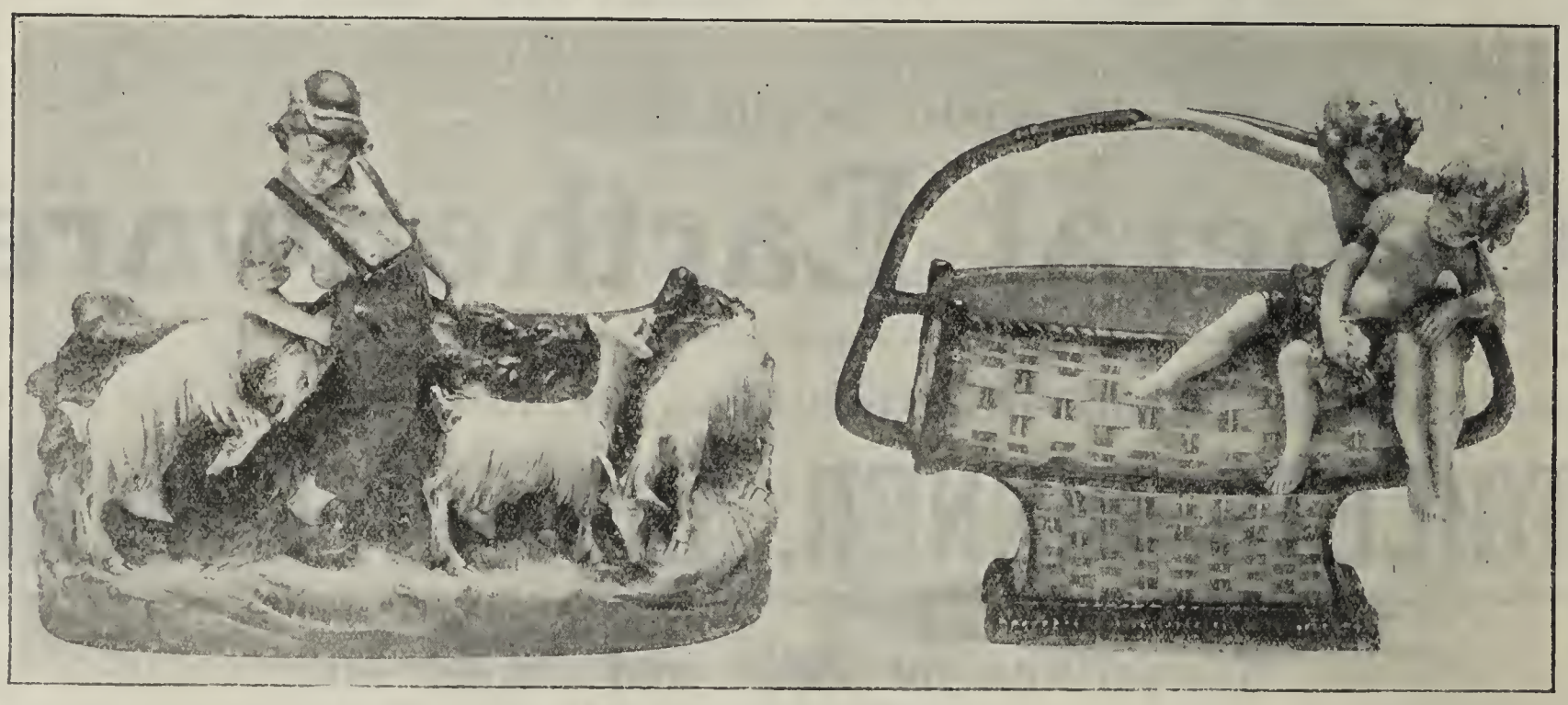
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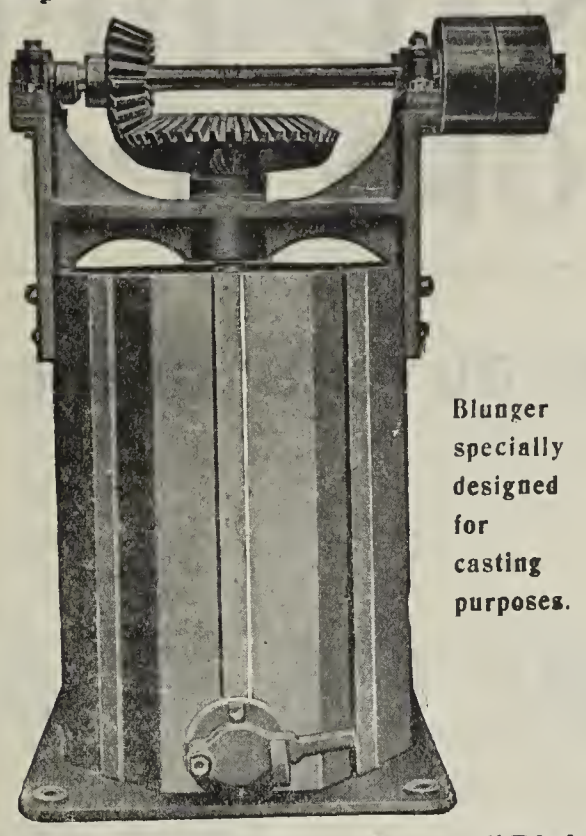
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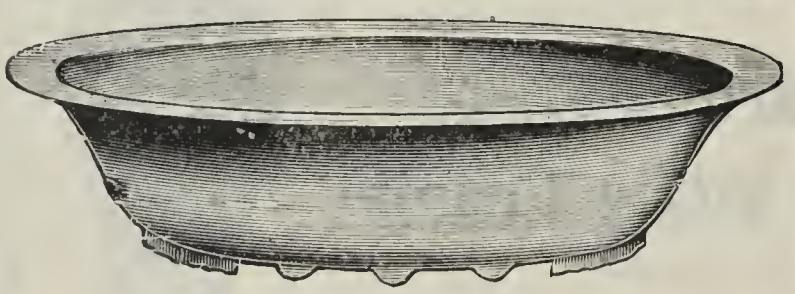
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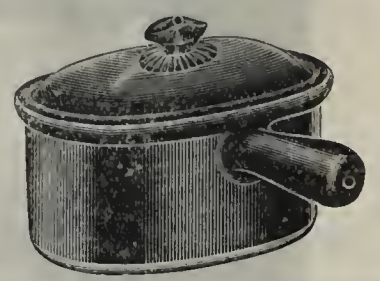
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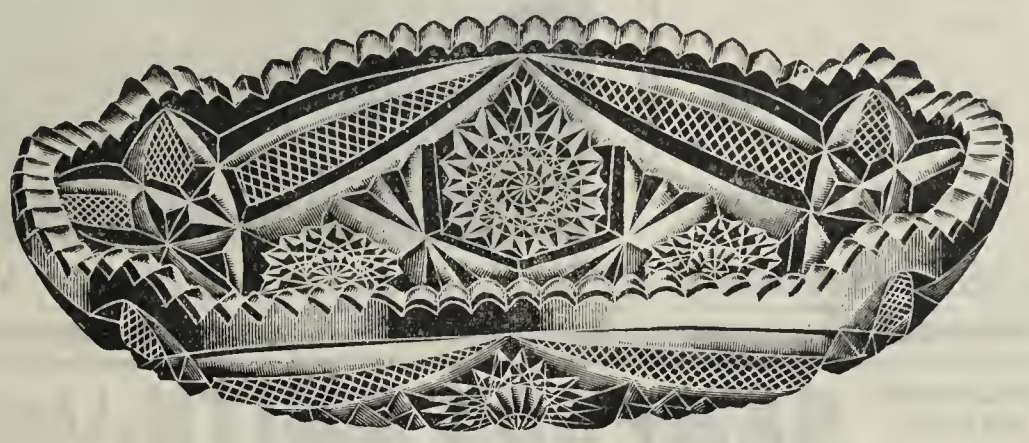
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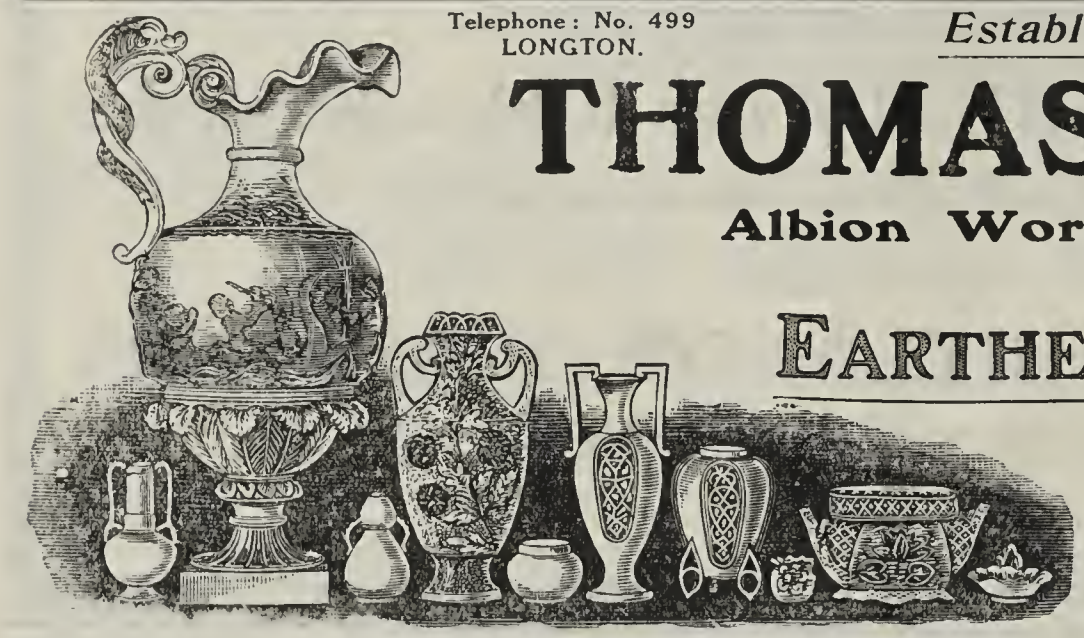
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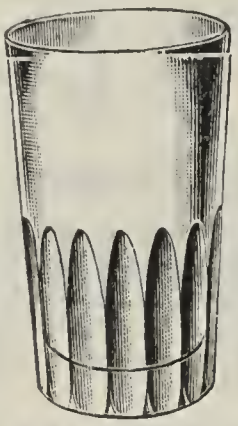
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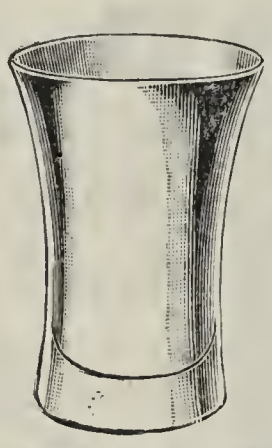


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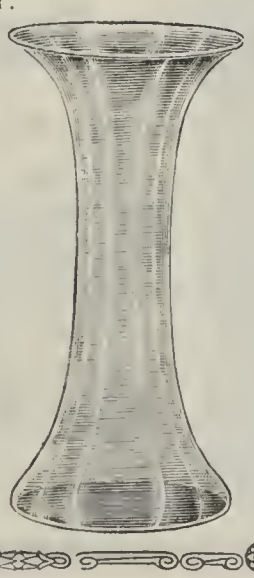
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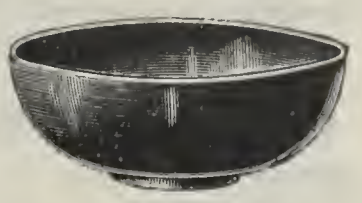
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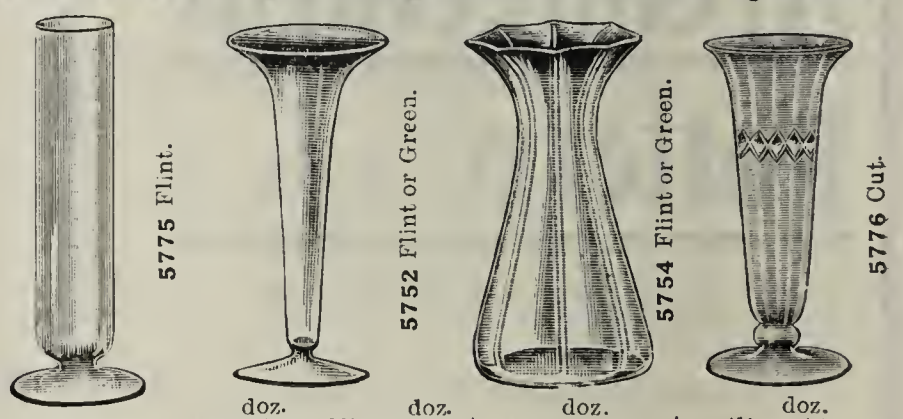
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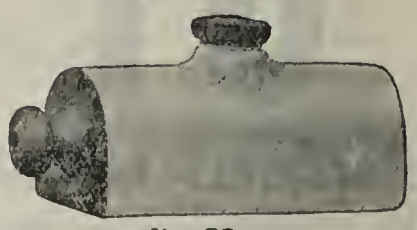
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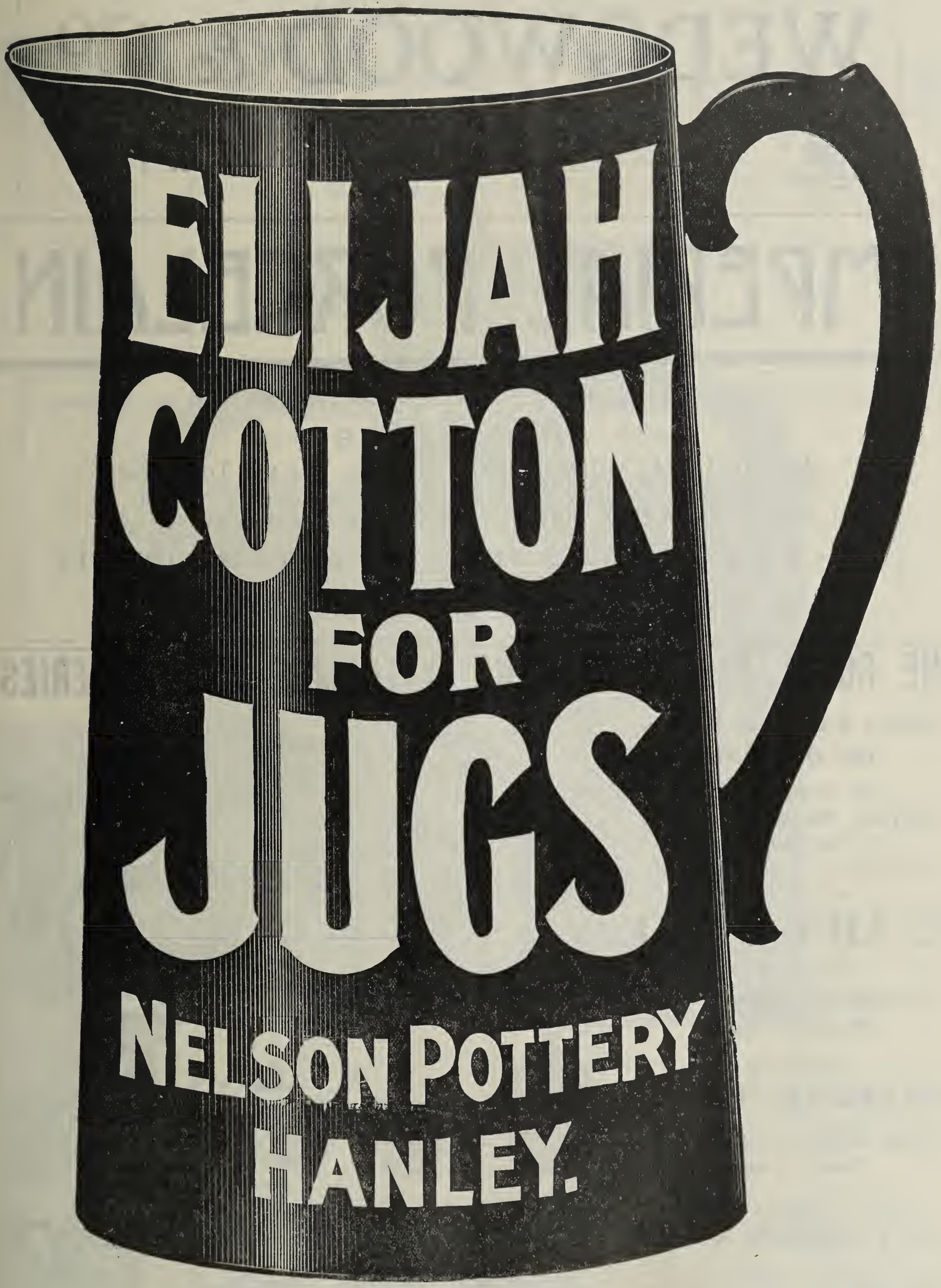
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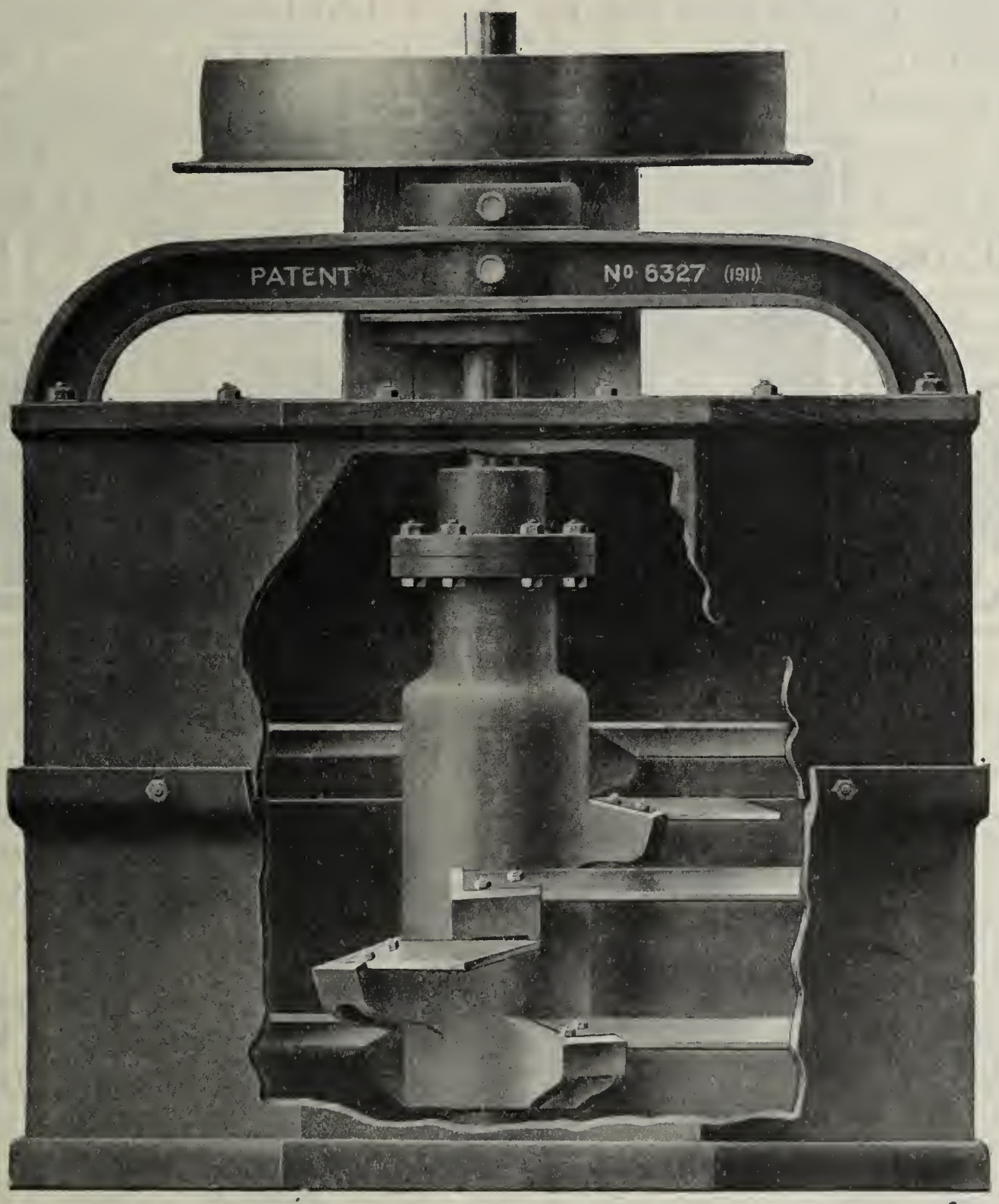


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DURING March a representative of THE POTTERY GAZETTE will visit the Leipzig Fair to report on the ceramics shown there. . We shall be obliged if any British firms who are sending goods to the Fair will advise us of the fact and mention the address where their samples may be seen.

WHAT EVERY RETAILER OUGHT TO KNOW.

SHOULD the retailer of pottery and glass understand how the wares in which he deals are manufactured? A similar question addressed to other traders would call forth very diverse replies. In grocery, for instance, the juniors and assistants are encouraged to make a study of the origin of the commodities which they handle. But in drapery establishments, we believe, a very close knowledge of the sources of supply would hardly be regarded as desirable. Still, in most trades, the answer to our question would be in the affirmative, and in the case of pottery and glass it would be most emphatically so.

We were convinced of this only recently by a conversation with a certain successful dealer and his wife. Though they knew the selling end of the business very thoroughly, they had never studied the technical industry on which it depended. They listened with close attention to the narration of a few of the "fairy tales of science" as applied to potting; and they were quick to perceive how very interesting these could be made to their customers, and how the attractions of their wares might be enhanced by a simple account of how the various effects were obtained.

This shows at once one great advantage possessed by dealers who have the technical knowledge referred to. Another benefit which it confers is to assist retailers in their relations with the manufacturer. Questions of breakage, faults and flaws, or delay in the execution of orders, can be much better dealt with by those who are acquainted with the conditions under which the processes of production are carried on. A claim can often be enforced by a well-supported proof of its justice, or fruitless trouble may be avoided by the holding back of an unreasonable demand.

Moreover, and this is most important, the well-informed retailer will just now be in a position to realise the force of the circumstances repeatedly referred to in THE POTTERY GAZETTE—greatly increased cost of materials and labour, coal and transport, as well as expenses imposed by the Insurance Act and the "Special Rules"—which are relentlessly driving prices of china and earthenware up to a higher level. And in transferring, as he must do, the burden of these higher rates to his customers, he will be able intelligently to explain the causes, and thereby allay the irritation which might be aroused by the arbitrary announcement, "Your crocks will cost you more."

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OUR PRIZE COMPETITION.

AS announced in our January number, we are offering a first prize of £5 5s. and a second prize of £3 3s. for the best appreciations of any lines of goods advertised in our issues of February and March, subject to the following conditions :—

The appreciations must not exceed 500 words in length ; they must be plainly written on one side of the paper only, and must reach our offices not later than March 15, 1913. The competitors must be subscribers to THE POTTERY GAZETTE or in the employ of the subscribing firms ; they must have personal experience in handling the goods described ; and they must have no interest, direct or indirect, in the firm making the goods. A declaration to this effect must accompany the competing contribution. Manufacturers may only compete with regard to materials and accessories.

The decision of the Editors of THE POTTERY GAZETTE with regard to the awards shall be final, and they shall be at liberty to publish all or any of the contributions in the columns of the GAZETTE.

We hope to announce the result of this competition in our April Special Issue. Further references to it appear under "Correspondence."

UNFAIR COMPETITION.

TO define exactly what constitutes unfair competition in trade would probably be exceedingly difficult, although every trader has his own ideas on the subject. It is, however, human nature to apply a stricter rule to competitors than one would be willing to be bound by oneself, and hence it must be admitted that the German Government was very courageous when it attempted, in 1909, to formulate a law dealing with this difficult question. Recently a White Paper has been issued by the Board of Trade giving some account of the working of this law during the past three years, and from it may perhaps be gleaned some information which might assist the British Government, if Parliament should ever find time to deal with such trumpery matters as trade and commerce.

The German law aims first at checking what may fairly be called fraudulent advertisement, of which there is plenty and to spare in our own country. Fortunately for the trade journal, it does not pay advertisers to be reckless in their statements when they appeal to the trade ; and hence, should the new German law be introduced into England, our withers would be unwrung ; but for the ordinary daily press the effect of the law would be to render illegal a good half of the announcements now appearing, for these appeal to that vast mass of ignorance which is called the general public. For instance, the ingenious lady who is always on the point of leaving for the Continent just after having bought a superlatively exeellent new piano, and must, therefore, dispose of it promptly at a third of its cost, would disappear at once, together with the gentleman who has recently furnished a house and whose domestie bliss is shattered to such an extent that he must put his household goods up to auction. Even a bankrupt's stock cannot be advertised as such if it no longer belongs to the original bankrupt estate. Any such trade announcement would render the culprit liable to imprisonment ; and one begins to speculate upon the difficulties which will beset the itinerant auctioneer when our trade laws become Teutonised. The general purpose of the regulations is, of course, to prevent the circulation of false statements calculated to induce people to buy ; this being considered unfair competition as against the straightforward trader ; but the above-mentioned regulation forbids the use of an actual fact for advertising purposes, and it appears that the only person who can legally advertise a bankrupt stock for sale is the Trustee in Bankruptcy. "Selling off" also comes under the restrictive operation of the German law. A genuine selling off for the purpose of settling up a business or for clearance purposes is permitted ; but it is to be conducted under the strict supervision of the authorities, and the replenishing of stocks for the purposes of the sale is prohibited. There is a provision requiring a schedule of the goods which are to be sold off, and any competitive trader can inspect this schedule. A penalty of a year's imprisonment or a fine of £250 is the punishment fixed for the trader who has procured goods for the express purpose of selling off. Regular stock-taking sales are, however, permissible under certain regulations.

The provisions of the new law having the object of safeguarding a business man's reputation from unfair comment on the part of a competitor are probably all covered by our own law of libel, which, as everyone knows, can be stretched to cover almost everything ; but the "secrets" of a business are perhaps better protected in Germany. Any employee who has obtained, in any way, knowledge of business secrets is liable to a year's imprisonment or a fine of £250 if he communicates them for the purpose of competition ; and "business secrets" include lists of customers, origin of merchandise, inventions which have not been patented, price lists, samples, balance-sheets, &c. The employee must, however, have obtained knowledge of the secret as a result of his employment, and a rather curious provision enacts that an invention made by the employee in the course of his employment becomes his master's secret and not his own.

With regard to the practical working of the law, it is thought that a sufficiently long period has not yet elapsed to enable a competent judgment to be formed. Commercial men rather resent the introduction of imprisonment as a punishment, because in many cases the employer is responsible for the acts of an employee. Hitherto, however, the penalties imposed tend to be on the minimum side.

Without expressing any opinion as to whether or not we ought to take a leaf out of the German book with regard to unfair competition, we ourselves have always been convinced that, so far as retail traders are concerned, the very best way of dealing with the evil is by the formation and extension of retail trade associations. If the traders of a district were to meet together once a week, or once a month even, and to discuss their several difficulties, an esprit de corps would very soon be established which would absolutely prevent anything in the nature of unfair competition amongst themselves. We have seen this spirit growing rapidly, even in the small meetings of retailers which now take place ; and if each trade were fully associated, we have not the slightest doubt that any alteration or strengthening of the existing laws would be found to be absolutely unnecessary.

CANALS FOR THE POTTERIES

THE question of providing water transit for the Potteries is at last assuming practical shape. Whether it will have all the good effect on our industries that has been predicted or not, there is not the least doubt that it will reduce the cost of transit of raw materials to the district, and also of manufactured goods out of it. The Joint Committee of the Staffordshire and Cheshire authorities, after long and mature consideration, have approved a scheme which will provide a waterway that will take boats of 100 tons capacity. A joint report by the Engineer to the Mersey Weaver Navigation, the Canal Engineer to the North Staffordshire Railway Co., and the owners of the Trent and Mersey Canal was prepared for the Committee, and it has been submitted to them in two sections, one dealing

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with the widening and deepening of the existing waterway, so as to admit of its use by barges of 60 or 70 tons, and the other considering a more ambitious scheme for boats of 100 tons capacity. The second scheme appears to have the preference of the Committee, and follows on the lines of Sir John Wolfe Barry's report to the Royal Commission on Canals. The main feature is the construction of an open waterway, avoiding the difficulties of the tunnels, which are such an interference with the present means of traffic. This is a question in which distributors as well as manufacturers are greatly interested, and it is suggested that a trust should be formed consisting of toll payers, representatives of the County Councils of Staffordshire and Cheshire, of the Corporation of Stoke-on-Trent and of traders in towns on the route of the canal, and of those who are likely to use the canal for through traffic. We do not offer any opinion as to the engineering difficulties, but we may accept the expressed opinion of experts who have carefully investigated the matter, that cheaper transit would be afforded for raw materials and manufactured goods that are now carried by rail. Any scheme which reduces cost of production and distribution will be welcomed by all engaged in the pottery trades.

TRADE REVIEWS FOR 1912.

THE POTTERY TRADE.—(From the "Birmingham Daily Post.")—The Staffordshire Potteries were more hardly affected by the coal strike than any other industrial district in the country. The industry was completely paralysed during March and early April, but once the factories were re-opened the trade in all its branches showed such remarkable recovery that the volume of business done during the year 1912 constitutes a record. During March and April the amount of exports declined by £12,446 and £74,813 respectively when compared with the corresponding months in 1911, and the home trade was more seriously affected. At the end of June export business to the total amount of £1,368,306 had been transacted, as compared with £1,498,739 in the preceding year. In June a pronounced boom set in, particularly in the foreign and colonial markets, so that in the autumn manufacturers with extensive foreign and colonial connections were running their works to the full capacity, had more orders than they could execute, and could not accept commissions for delivery under several months. The home markets were slower of recovery, but in the early autumn dealers who had allowed their stocks to run low in anticipation of easier prices were compelled to purchase, and the home trade generally took a buoyant tone, which was continued to the end of the year. Trade generally was so brisk that at the end of September the coal strike losses had been recovered.

The returns of the export trade at the end of the nine months showed that the figures for the corresponding period of 1911 had been surpassed, the business amounting to £2,216,631, as compared with £2,170,750 to the end of September, 1911. The exports of earthenware, which constitutes the major portion of the trade, had amounted at Nov. 30 to £1,689,914, as compared with £1,674,527 in the first eleven months of the previous year, whilst the aggregate export business amounted to £2,867,091 for the eleven months, as compared with £2,780,472 and £2,534,887 for the same periods in 1911 and 1910 respectively. One of the most remarkable features of the year had been the great increase of trade with the Canadian Dominion, which has for the first time in the history of the Potteries beaten the export trade to the United States. In the first eleven months of 1910 the exports to the United States were £475,444, and to Canada £333,001. In the corresponding period of 1911 the margin was further reduced, the United States taking £399,550 and Canada £369,687. This year the position is reversed, Canada taking premier position with £435,076, as compared with £374,469. Manufacturers generally were disappointed with the trade done with the United States, and are hoping for a tariff revision and increased trade as a result of the recent Presidential election. The Antipodean trade has been well maintained, the latter part of the year being brisk after a dull opening. The figures for eleven months with Australia are £289,544, as compared with £281,899 in 1911. The trade with South Africa and the East Indies shows little variation. As regards the Continental trade, exports to Germany have decreased from £73,836 to £66,088, but the trade with France shows a further substantial increase. In 1910 the figures were £51,598, last year they were £78,696, and this year they have reached £91,056. The china trade has shared in the general prosperity, and some manufacturers have had difficulty in the latter part of the year in fulfilling the demands made upon them. The sanitary trade, too, has shown further advance both in the home and export markets, the export figures being £481,330, as compared with £422,785 in 1911 and £334,478 in 1910. Although manufacturers cannot deny the general briskness of trade, a good many of them complain that the profits have not been commensurate with the output. There is no doubt that the increased price of coal and of materials, as well as the burdens imposed by the Insurance Act and the new special rules, have increased the cost of production, and there is a disposition amongst china and earthenware manufacturers to stiffen prices.

The coal strike was followed by a dispute between manufacturers and operatives as to prices in certain branches of the trade, but happily the differences were adjusted and another dislocation of the industry avoided. During August the International Congress of Pottery Operatives' Associations was held for the first time in the Staffordshire Potteries, under the presidency of Herr Fritz Zeitsch, one of the German delegates. Long consideration was given by the conference to the ravages of consumption amongst pottery workers, and international action was advocated. The new Special Rules of the Home Office for the better regulation of the dangerous processes of the trade formed the subject of a special inquiry at Stoke-on-Trent last month, when Judge Ruegg, K.C., was the Commissioner for the Home Office. The new regulations to minimise lead and dust dangers were not contested by either manufacturers or operatives, but objection was taken by the latter to the Home Office maximum temperature of 125 deg. for the drawing of ovens as being too high for the health of those engaged in this branch of the trade. The Home Office, supported by the manufacturers, contended that the maximum was reasonable. The Commissioner reserved his decision. The "self-inspection" clause was agreed to by the Home Office and the manufacturers. The new rules will come into force early in 1913.

THE GLASS TRADE.—(From the "Birmingham Daily Post.")—In the past few years there has been a distinct revival in the popularity of artistic glasswares, and this made further progress during the year under review, which was a satisfactory period for manufacturers. Birmingham and Stourbridge firms have done everything in their power to educate public taste and encourage the tendency to buy more expensive table ware, and some beautiful designs have been put on the market. Their enterprise has been rewarded, for there has been a growing demand for artistic wares both at home and from the principal centres on the Continent. The coal strike seriously interfered with poduction in this industry, but

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in the latter half of the year a large output was made, and prices have been better than in 1911.

THE CHINA CLAY TRADE.—(From the "Western Mercury.")—The year 1912, which has just come to its close, has been the most prosperous in the history of the china clay industry of Cornwall. The year 1907 was considered a boom year, and many who are experts in the trade thought this tremendous record would not be again reached for many years, but the trade of 1912 is far away in advance of anything known before. I shall expect to see the figures for the output for 1912 at something over a million tons. It is true there has been, and still is, a slump in the American cask trade, probably due to the fact that a much larger quantity is shipped to the States in bulk, and carried by a line of vessels of much larger dimensions than was the case two years ago. These ships carry a cargo of clay of anything between five thousand and thirteen thousand tons, and on every hand we see the prospects of the future looming large.

Nearly every firm has had an increased demand, not only for second and third grade clays, which have brought a good price, but the demand for best bleaching and potting clays has taxed the works to their utmost. New works are opening up, and new drying kilns are being erected to be in readiness for the demands of the future. One very fine work has just been started at Treviscoe, in St. Stephens parish, where the West of England Co. have built two drying kilns and pit and tanks for settling, with a siding running from the main line alongside the dry for the trucking of the clay. The work is fitted with an up-to-date set of suction gas plant for pumping and winding, which is up to the present very satisfactory, so much so that before the close of 1913 there will be similar machinery in more of their works.

The prosperity and output of this enterprising company have had the effect of inducing a large number of men into the district. Families have come from the farming districts of the north coast, and many from other parts of the county, and from Devon, to settle in the clay district, where work is plenty and healthy, wages good, and working hours short. When I say "short hours," I mean when compared with other parts of the county. The longest day in the clay area is from seven in the morning to half-past three in the afternoon, for a day's wage, in the majority of cases, of 3s. 4d. But the large majority, at the same time, are on piece-work, and, consequently, get a much larger wage in the same number of hours. In the district around St. Dennis there are similar signs of activity, new works opening up, new companies being formed, new houses being built, new families coming to settle and work in the clay mines.

All this increasing activity has made a very heavy demand upon the resources of the Great Western Railway Co., who, though not being able to run to Par and Fowey from Drinnick Mill, via High-street and Burngullow, have been doing their best to cope with the traffic. The opening of the new line to Meledor, via Melangoose Mill, has considerably stimulated and increased the output from the Fal Valley, It has also relieved the ratepayers of St. Stephens parish considerably. Before this line was constructed all the clay from the Meledor district was carried by traction to the High-street siding, causing considerable damage to the roads and making them totally unfit for pedestrian and light vehicular traffic. Although the G.W.R. have been able to take from the works all the loaded traffic, there has often been a serious delay at Fowey, caused partly by the increased number of larger vessels than formerly, and partly by insufficient accommodation and loading appliances. This state of things has been responsible for a large number of steamships going to Falmouth to receive their cargoes, which have been despatched thither by train. The G.W. Co. are alive to the fact that greater facilities and speedier despatch at this important port are needed, and have decided to spend a large sum to bring the loading jetties up-to-date, and so prevent steamers waiting so long for their turn.

Another important development in the St. Stephens district is the division of the Carpalla United Clay Co. It will probably be remembered that it was this company who won the great test case in the High Court and the House of Lords against the G.W.R. Co. "Is china clay a mineral?" All the Courts decided that china clay is a mineral, and consequently the mineral line was cut through, leading from Drinnick Mill to Burngullow. This company is now known as the Mid-Cornwall Clay Work and the Carpalla Clay Work, and will in future be worked as two separate companies. Both are making preparations for an increased production, and the Mid-Cornwall Company are contemplating an outlay of several thousand pounds for new shaft pumping gear and engine.

The same kind and amount of activity is manifest in the Bugle district. There are two new works opening up in the Greensplatt neighbourhood, where very extensive beds of clay have been discovered. All the works are working full time, and a large number overtime. The whole area is enjoying a period of great activity and progress, and several firms have entered into large contracts for 1913.

Just at present dry stocks are unusually small. Consequently they will require to work at high pressure to meet the demand. It was feared at one time that the coal strike would be detrimental to the production and output of china clay, but happily these fears were not realised, because the majority of the proprietors had large stocks of coal on hand, and in several instances were able to supply their workmen during that time of scarcity.

For china stone the year 1912 has been very prosperous, but the outlook for this year is still more hopeful. During the early part of the year there was a slump in china stone, and especially in hard purple; but the latter part of the year brought an increased demand, and very good prices were realised. The heavy stocks were soon reduced, and the various stone depôts rapidly depleted, and already the prospects are much brighter for all grades and classes of stone. Unlike clay production, the cost of raising the best china stone is bound to increase as time goes on, because the best stone goes down deep into the quarries, and the surface space in the majority of cases is very limited. But the present demands must be met at any cost.

THE GERMAN PORCELAIN INDUSTRY.—(Specially translated from "Das Handelsmuseum.")—After considerable discussion, the Association of German Porcelain Manufacturers collapsed during the autumn, chiefly on account of the conflicting interests of the large and small concerns. Of the 79 syndicated firms, 37 (mostly small works) seceded, whilst the other 52 formed a new cartel on a modified basis. It is anticipated that the secessionists alone will experience any disadvantage from the change, since the large works have made great progress during the past few years, and were also able to improve their position in foreign markets during the year just ended. The general improvement in the porcelain industry of late is easily accounted for by the more artistic taste displayed in the manufacture, the colouring in particular having been greatly improved and rendered more attractive to buyers. It is true that the older manufacturing houses in Berlin, Meissen, and Nymphenburg have always maintained the good quality of their table ware, but their products were mostly too expensive for a wide circle of customers. The manner in which this development of the porcelain industry has influenced its position in

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the world's markets is clearly shown by the export figures of the last six years, the shipments from January to October having been, in metric tons :—

	Exports.	Comparison with previous year.
1907	40,000 ..	—
1908	36,385 ..	−3,615
1909	32,825 ..	−3,550
1910	38,347 ..	+5,512
1911	42,415 ..	+4,068
1912	43,032 ..	+ 616

The set-back through the slump period of 1908-9, therefore, soon passed away. The chief foreign markets for the products of the industry are the United States and Great Britain. Of the exports during 1912, 27,761 metric tons were of coloured table ware, and 5,428 tons decorative vessels, figures, &c., and the total value of the exports amounted to 42·93 million mk. Owing to the uncertainty as to the future development of the industry under the altered conditions of the cartel, the large share companies will be very careful in their distribution of dividends, although it is certain that they will be able at least to equal those of the previous year. The twenty-six share companies which published balance sheets during the year distributed 3·13 million mk., on a total capital of 33·05 million mk. ; and on the previous occasion the holders of 32·70 million mk. of share capital received 2·62 million mk. in dividends, the increase thus being from 8 per cent. to 9½ per cent.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE POTTERY TRADES.—Employment continued good in the pottery trades in December, and was better than a year ago. Returns from firms employing 19,473 workpeople in the week ended Dec. 21 showed a decrease of 0·2 per cent. in the number employed ; and an increase of 1·6 per cent. in the wages paid, as compared with November ; compared with a year ago, there was an increase of 1·6 per cent. in the number employed, and of 3·5 per cent. in the wages paid.

In the Potteries employment continued good, and was better than a year ago ; though packers reported a decline as compared with the previous month, with some short time. In other districts employment continued good generally.

The following table shows the number of workpeople employed in the various branches of the trade and the amount of wages paid them in the week ending Dec. 21, 1912 :—

Branches.	Number employed.	Wages paid.
China manufacture	3,539	£3,875
Earthenware manufacture ...	11,956	11,783
Other branches (including unspecified)	3,978	3,936
Total	19,473	£19,594

Table showing the number emlpoyed in the different districts and the amount of wages paid them in the week ending Dec. 21, 1912 :—

Districts.	Number employed.	Wages paid.
Potteries	14,194	£13,876
Other districts...	5,279	5,718
Total	19,473	£19,594

THE GLASS TRADE.—Employment in December continued good. Returns from firms employing 8,239 workpeople in the week ended Dec. 21 showed a decrease of 0·3 per cent. in the number employed, and an increase of 0·7 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 6·0 per cent. in the number employed, and of 4·7 per cent. in the amount of wages paid.

Employment with glass bottle makers was good generally, and better than a year ago. Compared with a month ago a slight decline was reported in Yorkshire. At St. Helens employment was fair with sheet glass flatteners and good with sheet glass workers. At Birmingham it was fair with flint glass makers ; with flint glass cutters and plate glass bevellers it continued good, with overtime. At Wordsley and Stourbridge it continued good with flint glass makers and very good with flint glass cutters. Pressed glass makers on the Tyne and Wear reported it as fair, but not so good as a month ago ; with glass blowers in London employment was good.

Table showing the number of workpeople in each branch of the trades, with the amount of wages paid them in the week ending Dec. 21, 1912 :—

Branches.	Number employed.	Wages paid.
Glass bottle	5,783	£7,877
Flint glassware (not bottles) ...	1,820	2,242
Other branches...	636	743
Total	8,239	£10,862

Table showing the number employed in each district and the amount of wages paid them in the week ending Dec. 21, 1912 :—

Districts.	Number employed.	Wages paid.
North of England	827	£1,141
Yorkshire	4,771	6,406
Lancashire	559	678
Worcestershire & Warwickshire	960	1,241
Scotland	757	1,006
Other parts of United Kingdom	365	390
Total	8,239	£10,862

Resists for Etching.—Resist Pigments for Glass Etching. —(1) Asphaltum 500 parts, Burgundy pitch 230, tallow 150, Venice turpentine 280 parts, melted together on a sand bath and incorporated, by stirring, with 1,000 parts of oil of turpentine. (2) Syrian asphaltum 100 parts dissolved at a gentle heat in 400 of French oil of turpentine, and stirred up well with 40 parts of stearine, 30 of beeswax, 20 of Burgundy pitch, and 5 of tallow. (3) Asphaltum 250 parts, oil of turpentine 1,000, Burgundy pitch 125, tallow 40, oil of turpentine 500, Venice turpentine 50 parts. (4) Asphaltum 100 parts, yellow wax 100, pale rosin 50, tallow 40, oil of turpentine 500, Venice turpentine 50 parts. (5) Stearine 20 parts, wax 30, asphaltum 300, tallow 10, oil of turpentine 400 to 500 parts.——Lacquer Resists.— (1) Syrian asphaltum 180 parts dissolved in 480 of French oil of turpentine in the warm, and treated in succession with 125 parts of yellow wax, 100 of Burgundy pitch, 50 parts of strong printing varnish and 10 parts of beef tallow. (Open fire should be avoided.) (2) Wax 500 parts, mastic 600, asphaltum 600 parts. (3) Wax 400 parts, pale rosin 300, asphaltum 400, pitch 100 parts. —Specially translated from the "Sprechsaal Kalender."



THE BEST

In Quality, in Novelty, in Value.

BURLEIGH WARE.

Toilet Ware, Dinner Ware & Fancies

. . IN . .

NEW SHAPES & DECORATIONS.

MADE BY

BURGESS & LEIGH,

BURSLEM, ENGLAND.

LONDON—

Mr. WILLIAM H. LEIGH,
44, FARRINGDON STREET, E.C.

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Mr. R. J. HEATH,
Mr. E. DENIS LEIGH.

AUSTRALIA—

Messrs. T. W. HEATH & Co.,
51, Palings Buildings, Sydney.

NEW ZEALAND—

Messrs. THOMAS WEBB & Co., Ltd.,
Ormiston Buildings, Albert St., Auckland.

SOUTH AFRICA—

Mr. J. W. HUTTY,
3 & 4, Brunton's Arcade, West St., Durban.

Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

F. Winkle & Co., Ltd., Colonial Pottery, Stoke-on-Trent, are manufacturers of general earthenware in new and original designs. They specialise in toilet ware, dinner ware, suite ware, and artistic flower pots. Their London show rooms at 13, Charterhouse-street, E.C., furnish an object lesson, not only in artistic form and tasteful decoration as illustrated in their various productions, but also in the extent of their trade. There is a good display of samples in all lines, but the ranges of dinner ware and toilet services are particularly large. The long rows of samples of toilet ware, which fill the shelves on one side of the large room, include shapes and decorations in conformity with modern tastes. There are several exclusive designs of their own which indicate the resourcefulness of their modellers, and of course there are variations of the tall ewers and deep basins that are in vogue at the present time. Like other judicious manufacturers, Winkle & Co. supply what the public demand, so long as it is good taste, but at the same time they aim at improving the public form and ornamentation. We give an illustration of two very fine toilet services, reproductions of photographs taken by our photographer of samples from the London rooms, lent us by Mr. John Porter, the company's representative. The "Majestic" is a form appropriately named, and is supplied in several quite new treatments. The form adapts itself to many different styles of decoration. In some the old scale pattern is revived with pleasing effect. The shape is also shown with exotic birds and flowers. Other decorations comprise bands of colours, festoons and medallions, and either coloured or gold edge. We illustrate also the "Leighton" shape—a tall ewer with deep round basin, flanged. Decorations are applied both inside and outside the basin. The artistic side of "Whieldon Ware" as distinct from the useful goods, has been greatly extended, and many very pleasing forms are added to Mr. Porter's samples. We give an illustration of a finely modelled covered vase, with decoration in colour on a dark ground. This is a rich-looking, artistic ornamentation, exactly suitable to the shape. The same pattern is seen on many art forms. Many pleasing sets in suite ware are shown—always a strong line in "Whieldon Ware." The company are showing excellent reproductions of old Delft ware, in which the original true blue, which was, and is, so greatly admired, is faithfully repeated. Winkle & Co. are, as usual, well to the front with dinner ware, flower vases, and art shapes generally.

John Aynsley & Sons, Portland Works, Longton, are amongst the best known of china manufacturers, their principal productions being dinner ware, tea and breakfast ware, dessert services, and a number of useful and fancy goods for the home trade and specialities for the Colonial and foreign markets. They have a fine suite of rooms at 9, Charterhouse-street, London, E.C., where their London representative, Mr. J. J. Adams, has a large selection of samples of their principal lines always on show. The assortment of tea and breakfast ware is particularly interesting, and retail distributors may obtain some useful hints as to the attractive display of samples. Cups and saucers in long unbroken lines are imposing, but their artistic beauties are enhanced when these lines are broken at intervals by the introduction of sets of new shapes and decorations. The firm pride themselves upon the uniform excellent quality of their china, and this, in conjunction with new and refined shapes and artistic decorations, is the secret of the popularity of "Portland China." They produce a number of forms and ornamentations that have become established favourites, but they keep well to the front with novelties. The public taste changes from time to time, and Messrs. Aynsley meet its demands for new forms and decorations as far as they can be met with good taste. Bizarre shapes and extravagant decorations are avoided, while the artistic and the beautiful are encouraged. They are showing some pleasing reproductions of Bristol sprays on dinner ware and tea ware. The old Bristol china decorators were very partial to wreaths and festoons of laurel in green, with detached bouquets of flowers. Aynsley & Sons do well to reproduce these artistic ornamentations, and the high character of their "body" is especially suitable for the purpose. Connoisseurs appreciate old Bristol china, and those of us who cannot now obtain examples of it may be pleased with Messrs. Aynsley's modern reproductions of it. (I may mention, as indicating the sentimental as well as the intrinsic value of it, that a Bristol tea service, painted with bouquets and sprays of flowers in colours, gilt edges and handles, was sold at Christie's ten years ago for £39 18s.). The novelties for 1913 are too numerous to mention



F. Winkle & Co., Ltd., Stoke-on-Trent. [*Photo. by "The Pottery Gazette."*

CHIPPENDALE

KRYS-TOL



JEFFERSON GLASS CO.,
FOLLANSBEE, W.VA., U.S.A.

CHIPPENDALE

THE GLASS OF

QUALITY

AND

ARTISTIC MERIT

New Samples now on Show at our New Showrooms, fully maintaining our High Standard of Excellence.

Note New Address.

SOLE AGENT:

C. J. PRATT (NATIONAL GLASS CO.),
1, CHARTERHOUSE STREET,
HOLBORN CIRCUS, LONDON.

in detail, but a very pretty "chintz" decoration is worth special notice. This is seen to advantage on a new trinket set, which has a useful stand for hat pins and hair tidies in place of the obsolete scent bottles and candle sticks. In china dinner ware there are several rich but neat decorations, with festoons and old key border, black on gold. The samples include an extensive collection of coffee cups in high class decorations on pleasing shapes. There is also a good range of china plant pots in many decorations, a variety of fancy goods, china ware for hotels and restaurants, and the usual stock lines of china.

Wileman & Co. (The Foley China Co.), Longton, Stoke-on-Trent, have their London sample-rooms in Atlantic House, Holborn Viaduct (exactly opposite the City Temple). They are represented by Mr. T. E. Taylor, who is showing a large and well assorted selection of samples of their best productions in both china and earthenware. The rooms are light, and tastefully fitted expressly for the high class of goods made by the firm. "Foley China" ware, and ornamental pottery. They show many excellent examples of china dinner ware and dessert services, hand painted and gilt. They produce many shapes and patterns for the English market, and a number of specialities for American and Colonial buyers. The samples displayed in the London rooms (which are open every day) include an extensive range of tea and breakfast ware, good shapes with attractive decorations, and all the usual lines in white and white and gold china. A new decoration for the season is applied principally to tea ware, but is also shown with good effect on choice forms in china ornaments. This they call the "Ashbourne"—an artistic decoration equally suitable for suite ware, domestic ware, or severely classical forms. We give an illustration of a group of pieces with this "Ashbourne" decoration, a reproduction of a photograph taken by our own photographer of samples in the London rooms. The "Ashbourne" is very suggestive of the true Japan style, with harmonious combinations of reds, blue, and gold. It is



WILEMAN & CO., LONGTON. [*Photo. by "The Pottery Gazette."*

has for a long time been well known in the trade, and as manufactured by Wileman & Co. has acquired a high reputation. But "Foley" is the name of a district, and as other manufacturers in the same area have applied the same name to their productions, Wileman & Co. have adopted the name "Shelley" as their registered trade mark, Shelley being the name of the proprietor of their works. All their productions are now marked "Shelley" in a shield, with the words "Late Foley" above and the word "England" below. The firm continue to supply the same high-class body they have always supplied, of which the registered mark is a guarantee, a mark which cannot be used by any other manufacturers. This change has been effected quite as much in the interests of the public as in those of the makers. The firm's principal lines are china dinner ware, tea and breakfast ware, fancy china, and stock patterns of useful goods. They have a nice assortment of toilet ware in new and popular shapes, domestic earthenware, essentially artistic in design and treatment, and is an absolutely permanent underglaze decoration in rich colour schemes and bright glaze. The firm have many high-class decorations on table ware. A green and gold border on tea ware and dinner ware is particularly pleasing, as also are several acid borders on gold. Some reproductions of Old Lowestoft designs are very attractive in their fidelity to the originals. They have recently made some interesting developments in art ware, which they call "Cloisello," which is produced in two effects—turquoise blue and canary—with colour treatments of the subjects in perfect harmony with the groundwork. Their "Intarsio" pottery is essentially artistic in design and treatment, with an absolutely permanent underglaze decoration, in rich colour schemes, finished with a bright and velvety glaze, and to this line numerous additions have been made in both quaint and classical forms. An interesting range of subjects illustrating Surrey scenery, after Birkett Foster, is shown.

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Rustic views in black on old gold ground present some charming effects. Amongst other decorations on suite ware, Shakespearian characters and fishing subjects delineated with great care and artistically coloured are good fancy lines. All the firm's productions in china and semi-porcelain are refined both in form and ornamentation, but questions of space prevent reference to them in detail.

Dutch Art Pottery.—New examples of the finest Dutch art ware are now on show at the rooms of Mr. John Porter, 13, Charterhouse-street, London, E.C. There is a very interesting collection of the productions of Messrs. Hoyng, Gouda, for whom Mr. Porter is the sole agent in Great Britain and British shipping. This firm are manufacturers of a very large range of original artistic and fancy goods with all the best characteristics of Dutch art ware in



[*Photo. by "The Pottery Gazette."*

ELECTRIC LAMP STAND : DUTCH ART POTTERY.

form and ornamentation. Dutch decorations are popular in this country to-day, particularly the beautiful blue camaieu, with figures in Dutch costume, dancing and singing, with cupids and Renaissance ornaments as borders. Mr. Porter keeps well in touch with the manufacturers, and pays frequent visits to their works. At his suggestion they have produced a number of artistic forms that meet British tastes (British prejudices if you like), but with the light Dutch blue I have referred to. Many of these novelties are suitable for the spring trade, and for high class seaside bazaars. The firm have been very successful in the reproductions of antiques, including art vases, bowls and quaint forms in the best styles of Dutch art pottery. Mr. Porter is wisely showing these goods in a room, apart from his numerous samples of British pottery. The special features of the ware are thus enhanced by isolation. The firm make a speciality of portable standards for electric table lamps in their Dutch Art Pottery. Mr. Porter is personally sharing in this branch. His manufacturers supply him with a number of lamp stands—gracefully modelled and beautifully painted, and he fits them with British made silk shades, which are painted in Holland to match the decorations on the pottery pedestals. It is an excellent idea, and good results are attending it. We give an illustration of one of these handsome lamps with fittings and decorated shade complete. There is no limit to the variety of patterns that can be produced. They are beautifully painted and, apart from their utility, they are handsome table ornaments.

The Royal Longpark Pottery Co., Ltd., Torquay, Devonshire, are manufacturers of the class of pottery known as "Devonshire Ware." This ware has in recent years become popular in all parts of the United Kingdom. At first it had but a local reputation, and was made in shapes and ornamentations that appealed to residents in the neighbourhood of its production, but a number of quaint forms and inscriptions of mottoes in the Devonshire dialect made it useful as souvenirs, and when visitors to the various towns in which it was produced took specimens of it home with them, a demand for it by dealers in fancy goods was created. The company are represented in London by Mr. Alfred Baker, who shows samples of their goods at 8, Thavies Inn, Holborn Circus, E.C. They include a number of vases and fancy shapes in plain colours and variegated. Some good lines in flower pots and bulb bowls in solid greens, browns, and blues are supplied in many sizes. Vases and other art forms, decorated in the Persian style, are amongst the new goods shown. Other pieces, with white embossments on blue ground, are attractive and inexpensive. Many of the quaint shapes are common to "Devonshire Ware," but there are some specialities made by the Longpark Pottery Co. only.

Mr. S. Cook, glass manufacturer, Brierley Hill, Staffordshire, makes a speciality of epergnes and flower stands generally. He makes a number of very pretty designs, with glass bowls and with silvered plateau. The centre stands are supplied either with glass arms holding vases for cut flowers, or with glass hanging baskets for the same purpose. Spills and vases of various sizes are shown in flint and ruby. Ruby sugars and creams and some other small fancy lines are included. Mr. Cook is represented in London by Mr. Alfred Baker, who has a nice assortment of his samples at 8, Thavies Inn, Holborn Circus, E.C.

Pastes for Etching Glassware.—(1) Ammonium fluoride 10 parts, common salt $1\frac{1}{2}$, carbonate of soda $1\frac{1}{2}$ parts, intimately mixed and treated with 4 parts of concentrated hydrofluoric acid and 2 of concentrated sulphuric acid in a leaden crucible. With this mixture is incorporated $\frac{1}{2}$ part of potassium fluoride dissolved in 1 part of hydrochloric acid, and the whole is thickened to the desired consistence with thick water glass. After applying the paste the ware is placed in the warm for a short time after which the paste is washed off. (2) A mixture of powdered sulphate of potash, potassium fluoride and hydrochloric acid. When the desired effect is obtained, the past is washed off with lukewarm water and soap. (3) One thousand parts of ammonium fluoride are dissolved in water and treated with 500 parts of concentrated hydrofluoric acid, 2,000 parts of soda crystals being then added by degrees, after which the mass is brought to the desired consistenee by stirring in wheaten flour. Since this paste will not keep very long, it should always be used as soon as made.—Specially translated from the "Sprechsaal Kalender."

E

A FEW CHINA SHOPS IN SOMERSET AND NORTH DEVON.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

(*Continued from page* 62.)

TAUNTON—(*continued*).

MR. ROBERT RENDELL, 35, Bridge-street, Taunton, has a china and glass business of the older type—that is to say, it is limited to those goods, and does not include toys and games. The shop is in a good position for business, and has large front windows very attractively arranged. The business has been established about thirty-five years, and a regular connection has been formed. At the same time Bridge-street is a good locality for what is called a passing trade. Taunton is a busy market town, and Bridge-street is part of the direct road from the railway station and from the northern suburbs to the Market House and the Corn Exchange in the centre of the shopping streets. The front shop is a spacious one and contains a nicely varied selection of useful and ornamental goods of every description, but mostly in good medium qualities. Nearly all the principal manufacturers of pottery and glass ware are represented by their latest novelties. In addition to the well provided general shop, there is a neat sample room on the ground floor where ladies can make their selections in quietude. There are other show-rooms on the first floor, and rooms for stock above these. Domestic goods are stocked in the most liberal manner, the display of toilet ware, dinner and dessert services, tea and breakfast ware, includes shapes and patterns to suit all tastes. Foreign china and glass are shown together with British-made goods, but the greater part of the stock is British. Mr. Rendell is well versed in the trade, and he goes a long way to meet the wishes of customers by undertaking matchings and repairs. These are branches of a retail business that are often regarded as troublesome, but experience has proved that they are indirectly well worth cultivating. A tradesman who will carefully rivet a broken vase, and who will take some pains to replace a broken piece in a favourite tea set or dinner service, frequently makes a regular customer of a chance visitor. The shop was being prepared for the Christmas trade when I saw it, and things suitable for presents were in abundant evidence.

SMITH'S CHINA, GLASS AND FURNISHING STORES, 21, East-street, Taunton, is a large and comprehensive business, of which pottery and glass form a very considerable part. There is a good window display, and a well-arranged interior. The show of dinner, tea and toilet ware is a good one. I was desirous of having a photograph of the pottery section, but I was not able to obtain one. It is an old business, and includes hardware, furniture and fancy goods. There was a large display of the last-named—probably in anticipation of the approaching Christmas trade. I noticed that the "Stores" undertakes the removal of furniture by road or rail, and that they take orders for petroleum for lighting purposes.

STOWELLS', 12, North Parade, Station-road, Taunton, describe their business as "glass, china, household ironmongery and fancy stores." They make a good general display of domestic pottery and glass, and were busy arranging fancy goods for the Christmas trade. The business was under the charge of a lady who did not express very strong hopes for the coming season, though the special lines shown were in anticipation of it.

THE DEVON AND SOMERSET STORES, corner of High-street, deal in practically everything. They claim to show 10,000 articles. I cannot verify this claim, but I confess it would not be easy to mention anything useful that they do not supply. They were holding their annual show at the time of my visit, and fireside games, toys, Christmas and New Year cards, fancy fruits and sweets, were offered in company with wines, spirits, bags, work-baskets, leather goods, perfumery, and—glass and china. They assert that their show this year comprises the largest and most varied stock of useful and fancy articles suitable for presents in the West of England. The stock of glass and china, at any rate, is a very large and nicely selected one. They do an essentially ready money trade—a great advantage to a retail distribution. There are many persons who, without a murmur, pay cash for sets of goods they buy from the "Stores," but who habitually get their oddments from a china dealer and expect to have credit. The principle of cash trading is a sound one, and it is the chief factor in the success of so many stores.

WESTON-SUPER-MARE.

One of the most famous health resorts in the West of England, Weston-super-Mare, occupies a charming position on the Somersetshire side of the Bristol Channel where it is open to the breezes from the Atlantic Ocean. Considering its special natural advantages it is somewhat surprising to find that it is little more than a hundred years since it was "discovered" as a watering-place. In 1811 the number of inhabitants was only 160, and they were mostly fishermen who, no doubt, enjoyed the health-giving climate themselves, but did not offer many inducements to strangers to participate in them. When, however, the local authorities awoke to the fact that visitors would bring money to the town, serious efforts were made to attract them. The natural advantages of the small but well-situated fishing village were supplemented by artificial improvements, and the number of visitors in search of health and pleasure increased year by year. This led to such an increase in the permanent residents that they now number 24,000. One reason for the development of the town is that it enjoys the advantage of two seasons. It is popular as a winter as well as a summer resort. There are, of course, more visitors in the summer months, but Weston is not deserted in the winter as some places are. Its delightful climate is appreciated by invalids, while its beautiful scenery and refreshing breezes are welcomed by tourists who are sated with foreign travel. The district councillors have done much to enhance the attraction of the town, and now they are reaping their reward. There are beautiful esplanades and marine drives, and several public parks and a fine pier. There are many places of historical interest in the immediate neighbourhood and several fine public buildings, but time did not allow me to be diverted from the one object of my visit—that was to see as many of the glass and china shops as I could. I can, therefore, only speak of them.

MR. W. A. BOARD, glass and china merchant, "The Staffordshire Warehouse," 18, St. James'-st., has, without doubt, the finest shop in our trades in the town. It is well situated in a good business centre very near to the entrance to the new Grand Pier. I had the pleasure of a short interview with Mr. Board, who personally showed me over his extensive premises. I had not met him previously, but I was pleased to find that he is a regular subscriber to THE POTTERY GAZETTE, of which he said many kind things. We give an illustration of his attractive front windows. They are large and lofty, and are exceedingly well arranged. This is equally true of the interior of the shop and of the showroom. He has a very large and well-selected stock, and is evidently doing an extensive business in high-class goods. I made some reference to the fact that he had a very fine assortment of best goods, and to the unusually tasteful manner in which they are displayed in the windows and in the shop itself. Mr. Board then let

me into a little secret. Mrs. Board is a lady of considerable artistic ability, and she finds pleasure in dressing the front windows herself. I learnt that the large business has entirely grown up under the personal care of his wife and himself. When they first went to Weston-super-Mare there were two glass and china businesses in the immediate neighbourhood. The proprietor of one retired and the proprietor of the other died suddenly. At that time Mr. Board was carrying on another and very different business in part of No. 18, St. James'-st., his present address. It occurred to him that there was a good opening for a glass and china business, so he decided to go into the trade, and his wife entertained the idea with great pleasure. There is reason to think that Mrs. Board's appreciation of the artistic and beautiful had some influence on this decision. I was not told this in these words, but I inferred it when I was told that for a few years she handled the then small business herself. It, however, grew to such proportions that Mr. Board had to assist her with it, and in a short time he found it desirable to give his whole time to it. At that time the town itself was growing rapidly, and the business grew with it. He then devoted the whole of his premises to the glass and china trade, and when, in course of time, increased accommodation was an absolute necessity, he took another shop, No. 24, James'-st., which he now occupies as showrooms and storerooms. For many years Mr. Board has given all his attention to this business, and Mrs. Board takes a general supervision of the arrangement of the windows and the showrooms. Mr. Board says they have always endeavoured to supply a good article, and (to quote his own words) "full value for money, in goods of the latest and most up-to-date description, and to do this they have dealt only with reliable firms, and have nothing to do with so-called cheap lines of seconds." This is a high ideal for a tradesman, but Mr. Board seems to have lived up to it. He believes that the general public appreciate a good article at a fair price that can be repeated, and he thinks this accounts for the volume of business he has done, and which is still increasing. They make the largest and most attractive window display I have seen on this tour in the West—the result of Mrs. Board's artistic instinct. The goods themselves support this statement. They include Royal Worcester, Crown Derby, Doultons, Aynsleys, Burleigh Ware, Shelley-China, Losol Ware, and many other productions. In glass ware Mr. Board stocks some of the best productions of Thomas Webb & Sons, Ltd., Stevens & Williams, and other Stourbridge manufacturers, with pressed glass from Manchester and the North of England, and American and Continental goods for certain lines he finds it necessary to keep. In fancy goods they rely on English wares as far as they can get them of the character required by the public. Mr. Board says he learned while abroad that English goods always carry with them the stamp of reliability. Stoneware, red ware, and white and gold china are, of course, stocked in abundance, while fancy art pottery is well looked after—particularly Bretby-Ware and Ault-Faïence, with cheaper varieties for those who want them. It was interesting to hear Mr. and Mrs. Board's references to the marvellous changes in the character of goods produced during the last twenty years, and they find that the public taste has kept pace with them. Garish decorations, once in demand, are now absent. I found Mr. Board very reticent on matters pertaining to himself, but since my interview I have obtained some personal items that are worth mentioning. In addition to the claim on his time and energy necessitated by his growing business, Mr. Board is, and has been for the past fourteen years, a member of the Town Council, and has at the same



MR. W. A. BOARD, WESTON-SUPER-MARE.

time been particularly interested in the musical world, having officiated as an organist for nearly thirty years. Like many other very busy men, Mr. Board has found time to be an active worker in the religious world, and for a very long period has been a Sunday-school superintendent. There are some useful lessons to be learned from these ideal tradesmen. They have deserved the success they have achieved, and we wish them a continuance of it.

Mrs. F. O. Shepherd, 35, Meadow-street, Weston-super-Mare, has a neat-looking corner shop in an excellent position. Meadow-street is an important thoroughfare in the main route from the new Grand Pier, right across the centre of the town. Mrs. Shepherd controls the business herself, a task for which she seems especially qualified. Her goods are very attractively displayed, both in the window and in the shop. There is a something about the arrangement of the stock that indicates that it is managed by a lady. Exactly what that "something" is, I cannot easily explain, but china and glass lend themselves readily to dainty effective adjustments that only a lady can be familiar with. Mrs. Shepherd does a mixed business, supplying the best classes of china, glass, and earthenware, and also keeping a good stock of medium quality in all lines. The useful domestic pottery and glass are sufficiently varied to meet the requirements of all classes of customers, while there are fancy articles to serve as souvenirs for visitors. Mrs. Shepherd calls her shop the "Western Supply Stores," and, though her trade for the greater part is in pottery and glass, she stocks a little useful household ironmongery, &c. This she was induced to keep to meet the convenience of her regular customers for china, &c. The business has been established for five and twenty years, and a steady family trade has been built up, supplemented by an increasing business with visitors. She stocks the productions of most of the medium and better class houses, and spoke in terms of appreciation of several of them with whom she has done business for many years. She caters for the industrial population as well, and has the reputation of supplying useful articles at popular prices.



Fig. 1.—Miss Godden, Barnstaple.

BARNSTAPLE.

the capital of North Devon, is very pleasantly situated on the bank of the river Taw, about six miles from its mouth, and in a pretty valley formed by a semicircular range of hills. It was a place of some importance in the time of the Ancient Britons, and also in Saxon times, and has taken a prominent part in several historical incidents since those days. There are many places of antiquarian interest in the immediate neighbourhood, for those who have time to look for them. The town is governed by a mayor, aldermen and town councillors, and the authorities have done much in recent years to beautify it with public parks and gardens. Private donors have also contributed to make it attractive to visitors and residents. It is a seaport with a considerable amount of trade, and is one of the principal marketing centres in the West. Formerly it was noted for its flourishing woollen industry, and when that declined there were fears that the town would degenerate. These fears were fortunately dispelled by the inauguration of other industries, and now does more business than ever in the manufacture of gloves, collars, lace, paper and cabinet ware, and also (as will be seen from articles in this Gazette) in pottery manufacture. It is, however, with its distributing, rather than its manufacturing, features that I am dealing in this notice. For a town of 15,000 inhabitants it is well supplied with retail shops in all trades, and the tradesmen cater very efficiently for the villages in the surrounding country, who regularly come to Barnstaple to do their marketing. In addition to these, a considerable number of visitors for health or pleasure have to be provided for. The climate all the year round is genial, and the numerous open spaces make it an ideal place for those who are advised to live as much as possible in the open air.

Miss E. W. Godden, 101, High-street, Barnstaple, is a china, glass, and pottery merchant in the principal street in the town, running from Rolle-street in the north to the Square and the famous Barnstaple Bridge. High-street is almost of necessity traversed by visitors for health or pleasure, and one of the largest covered market places in the West of England connects High-street and Boutport-street, the two best streets. There are two market days weekly, when crowds not only throng the market place but the streets in the immediate neighbourhood. The Corn Exchange, under the Albert Hall, has a floor space of upwards of 4,000 ft., and is a place of interest to visitors apart from those who do business there. It will, then, be seen that Miss Godden's shop is most advantageously situated for a high class retail business. I had a short interview with the proprietress, who accompanied me over

her extensive premises. It is a large business to be controlled by a lady, but Miss Godden manages it with great ability. The circumstances under which she succeeded to it are interesting and pathetic. It has been in the hands of her family for many years, and when her father died she decided to continue the business herself. She had then considerable experience in the trade, and was especially fond of the higher branches of it. I have frequently emphasised the peculiar suitability of artistic china and glass as a retail business for a lady. I have no knowledge of the class of trade originally pertaining to the shop, but I can well believe that the trade now done in high class goods has been greatly developed, if it was not created, by Miss Godden herself. She has an artistic appreciation of the best British porcelain, and of Stourbridge glass, and has a pleasant manner of speaking of them which cannot fail to interest intelligent customers. This is an advantage possessed by individual dealers that very few "Stores" can offer. To deal with a responsible vendor, who is able to speak intelligently about high-class goods, enhances the pleasure which all ladies feel in "shopping." Miss Godden has a very large stock, which includes the very best goods in porcelain, china, glass and pottery for both use and ornament. She also keeps a large assortment of medium quality goods in all lines. In Fig. 1 we give an illustration of the front window—a reproduction of a photograph taken expressly for us. It is a handsome front with a bold entrance, large windows, and an artistic fascia. The window was dressed for the Christmas trade, and Miss Godden says a Christmas display does not look so well in a photograph as an ordinarily dressed window does. The window as I saw it was decidedly attractive—and that is everything at Christmas time, but the photograph misses a great part of the effect by the absence of colours. In Fig. 2, the interior of the shop, the result is more satisfactory, though that also is limited to black and white. It is a large and judiciously arranged shop, and considerable skill has been exercised in displaying the goods conveniently for inspection. The stand in the centre is very effective, and there is plenty of space for customers to walk round it. Our illustration shows the general arrangement so that but little verbal description is necessary. There is a room in the rear of the shop set apart for fancy cabinet goods, in which Miss Godden does a considerable business. Pottery and porcelain for ornamental purposes are here shown on artistic furniture for which they are appropriate. It is a happy idea to show artistic pottery as adjuncts to antique and fancy modern furniture. This department is quite separate from the glass and china business, but in an adjacent room, as seen in our illustration. There are stock rooms, warehouse, and packing rooms in the rear. My visit was quite unexpected, so that I saw the premises under the usual working conditions. The whole place was a model of neatness, an object lesson in methodical management. Miss Godden has a numerous staff, of whom she speaks in the highest terms of praise. Many of them have been at the shop for years, and she spoke feelingly of the happy relations that exist between them and herself. To use her own words, "No employer could be more loyally served than she is." I had not an opportunity of hearing their opinion of her, but I feel sure it is most favourable.

Mr. G. S. Summerfield, 93 and 94, Boutport-street, Barnstaple, glass and china dealer, has a good shop in a wide street—one of the best in the town. Mr. Summerfield stocks useful household pottery and glass, but makes a special feature of licensed victuallers' requisites at wholesale prices. He goes very thoroughly into this business and, as he was a licensed victualler for many years, he has a very practical knowledge of the requirements of the trade. He stocks every description of glass ware used by licensed victuallers, and keeps a large assortment of all kinds of stamped glass and stamped earthenware, and a variety of spirit barrels and flasks. He does not confine himself to glass and pottery, but supplies copper measures and funnels, cheek taps and corkscrews, pewter jugs, plated tankards and drip-pots, plated and pewter measures, brass and plated taps, sponge and glass cloths, and a number of other specialities.



Fig. 2.—Interior of Miss Godden's Shop.

Mr. A. Widlake, Joy-street, Barnstaple, is a general house furnisher, who stocks pottery and glass of the usual domestic kinds. He keeps our goods as side lines to his furnishing business, and deals chiefly in medium qualities. As a branch of his business, he lends out goods on hire. Joy-street is a busy market thoroughfare between High-street and Boutport-street, and very near the market, a favourable position for retail trade.

Mr. Samuel Taylor, 78, High-street, and 11, Market-street, Barnstaple, is a glass, china, and earthenware dealer with large and attractive shops in a busy neighbourhood. If Market-street was not a recognised shopping district, the presence of a pushing tradesman like Mr. Taylor would make it one. We do not remember to have met Mr. Taylor before this visit to Barnstaple, and our interview with him was not a very long one, but long enough to convince us that he is an unusually "smart" and active business man. We do not use the word "smart" in any but its proper sense. Mr. Taylor is a hard-working, vigorous man. He has a competent staff, but does an immense amount of work himself that a less energetic man would delegate to others. He keeps a large stock of practically everything in glass, china, pottery, and hardware. We give an illustration of his imposing front windows from a photograph he had taken for us. The shop itself is a spacious one—wide and long—and there are good stock rooms in the rear and overhead. At the time of my visit fancy goods for Christmas and the New Year were being displayed in abundance. Mr. Taylor's plan seems to be to select good saleable lines, and to show them in large quantities. The ample space at his command allows him to show in dozens goods that are frequently shown in units or in pairs. He announces himself as a specialist in pottery and glass, and he tells the public that if he has not in stock exactly the thing they require he will get it for them. We had not an opportunity of inquiring where he obtained his experience, but he has evidently an extensive knowledge of all branches of the trade. He buys largely, and so is able to buy economically. All the goods that were marked bore reasonable, but not what are termed cutting, prices. There are some cases of china and glass by the best makers, but the majority of the stock consists of medium class goods. He shows many interesting lines in neatly decorated household pottery, some of them produced especially for him, and, of course, confined to him. Mr. Taylor seems to possess that natural ability for selling which is more prominent among drapers than with china and glass dealers. His knowledge of the trade must be very helpful to customers, and is the secret of the growth of his business.

ILFRACOMBE

is a quaint little town with about 9,000 inhabitants, and being prettily situated among rocks on the craggy coast of North-West Devon, it is an attractive place for visitors in search of health or pleasure. It has an excellent natural harbour, which accounts for its importance as a town in days gone past, while its mild climate contributes largely to its popularity at the present time. It is a good market centre for poultry, fruit, and vegetables, and is regularly frequented by residents from the surrounding districts. It has made rapid strides in public favour within the last quarter of a century. Formerly there was one long, straggling street from the Quay to the Parish Church, now there are other important thoroughfares running parallel with it, and several good streets at right angles with it. For a town of its size it is well supplied with retail shops, but many devoted to the sale of fancy goods are closed in the winter months, so that I saw the place at a disadvantage—from a retail dealer's point of view. There are some good shops in our trades.



Mr. Samuel Taylor, Barnstaple.

Mr. F. C. White, Art China Rooms, 23, High-street, has the best business in the town. He does a high-class trade, and his premises are beautifully appointed and specially fitted for his business. We give an illustration of his handsome front designed by himself. The goods are skilfully arranged, and include examples of the best makers of pottery and glass ware, as will be seen from our illustration reproduced from a photograph taken expressly for us. Amongst other high-class ceramics Wedgwood & Son's famous blue and white jasper is very prominent. The space under the window board is turned to excellent account, and as it is has plate glass all round, the effect as seen from inside the shop is very striking. The light from the front shows every piece very clearly. All the woodwork is enamelled white and gold, with considerable artistic effect. The shop itself is easily seen from a distance. The window display is not too crowded, and intending customers, or mere passengers in the street, can easily see the examples of useful and ornamental goods. The pieces shown are representative of the large and varied assortment in the shop itself. Mr. White has had a long experi-

ence in the higher branches of our trades, and though he has only been in his present shop about four years he is no stranger in Ilfracombe. For about fifteen years he did a high-class business in artistic china, pottery, and glass at No. 34, High-street, and then removed to Hastings, where he did a similar trade, until he wanted a change, and then he returned to Ilfracombe. He expressed himself as quite satisfied with his latest venture. A better stock of high-class goods it would be difficult to find, and he has the advantage of fine premises, situated in the best street in the town, and conveniently fitted in accordance with his personal instructions. In addition to the elegant front shop he has a separate show room in the rear, and packing and stock rooms at the end of it. Mr. White has a good knowledge of the manufacture of both pottery and glass, and though he has had no experience of the making of either, he has had many opportunities of witnessing the manufacture, and has supplemented the knowledge so gained by extensive reading. His acquaintance with the details of manufacture is often of great service to him when advising customers. He says it is this special knowledge which gives the individual dealer a great advantage over the department houses. He says he has always been able to "hold his own" against them, both in Hastings and Ilfracombe, and sees no reason why he should not continue to do so. Their catalogue business may perhaps injure him in some measure, but by showing up-to-date goods at fair prices and packing free, he keeps his old customers and makes new ones. Mr. White relies solely on selling high-class china and glass to private customers, and maintains a good connection without contract work or wholesale trade.

(*To be continued.*)



Mr. F. C. White, Ilfracombe.

Backing Varnish for Mirrors.—(1) Venice turpentine 4 parts melted over a fire and heated along with 8 parts of finest orange shellac until the mass is homogeneous. When cooled, 32 parts of strong spirit of wine are gradually incorporated by stirring, the mixture being finally strained through a linen cloth. (2) Sandarach 3 parts, shellac 2, and mastic 6 parts are crushed and dissolved in 49 parts of spirit. After adding 3 parts of Venice turpentine the mass is gently warmed, and left to stand for 48 hours, the supernatant liquid being poured off and filtered.— Specially translated from the "Sprechsaal Kalender."

A SHORT VISIT TO SOME NORTH DEVONSHIRE POTTERIES.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

(*Continued from page* 55.)

MR. W. L. BARON, BARNSTAPLE,

IS a well-known manufacturer of Barnstaple Artistic Pottery. His pottery is at Rolle Quay, on the banks of the river Yeo, about five minutes' walk from the Barnstaple Market. He has a depôt with a handsome front in the Square, where there is always to be seen a fully representative collection of his numerous productions. I called at the depôt first, attracted to it by the interesting window display, which is seen to advantage by strangers entering the town from Barnstaple Junction Station by way of the famous bridge. I was told Mr. Baron himself was at the works at Rolle Quay, and after a look round at the distributing shop in the Square, I went on to the pottery and had an interview with him. He



FIG. 1.—MR. W. L. BARON'S GLAZING ROOM.



FIG. 2.—THE DECORATING ROOM.

was busily engaged in the modelling room, but kindly devoted some time to me, showing me round his works. He wore his "overall," and at my request he refrained from divesting himself of it, so that I saw him under his usual working conditions. I was thus able to form a truer estimate of the artist and his work than I could have done if he had expected me, and had brushed himself up for the occasion. Mr. Baron is another example of the advantages to the nation of systematic art training. Mr. Baron was always artistic in his tastes, and studied for some time at South Kensington, until he qualified as a Certificated Art Master. He then went as art designer to Messrs. Doulton's, at Lambeth, where he remained a few years, after which he was engaged by Mr. C. H. Brannam, at Barnstaple, with whom he remained for about nine years. Without being unduly egotistic, he realised that he had a talent for the decoration of pottery, and, to use his own words, he decided to "have a splutter" on his own account. He commenced in a very modest way, and founded another of the small potteries (of which there are many instances in this country) whose proprietors invested their productions with such interest that they became widely known in markets far away from their own neighbourhood. All Mr. Baron's pottery is made and decorated by hand, so that no two pieces are exactly alike. The shapes are all artistic or quaint, the colours and glazes are rich, and, speaking generally, the ware is made in four styles, plain, decorated, grotesque, and with the popular old Devonshire mottoes. He makes special features of puzzle-jugs and of grotesques. The majority of the last named are his own work, modelled from life. He has been particularly successful with reproductions of a venerable owl which has been in his possession for about eleven



FIG. 3.—ENTRANCE TO THE KILN.

years. I saw this owl, a macaw, and a cat, all of which are made famous in pottery. It was a signal honour when the Royal Commission, of which H.R.H. the Prince of Wales (afterwards King Edward VII.) was president, invited Mr. Baron to send (at their expense) a case of his ware to the St. Louis Exhibition (U.S.A.) as an example of British Art Pottery. He was awarded a silver medal at St. Louis, a silver medal at Christchurch, N.Z., a



FIG. 4.—A GROUP OF MR. BARON'S ART SHAPES.

National Bronze Medal, a gold medal at the Festival of Empire and the Turin Exhibition, and gold and silver medals and diplomas of merit at various provincial exhibitions. Mr. Baron aims at supplying artistic ware at reasonable prices, and he invites strangers visiting Barnstaple to see it made and decorated. The making of Baron's art pottery is one of the most interesting sights in Barnstaple, and casual visitors to the shop in "The Square" are given a card entitling them to go over the works at Rolle Quay. The goods are especially suitable for presents, in which he does a large trade. Classical and quaint shapes in vases, candlesticks, mugs, jugs, and bowls in greens, reds, blues, browns, and yellows, small boxes, hat pins, and buttons are amongst the miscellaneous pieces. We give illustrations of (1) The Glazing Room, (2) The Decorating Room, (3) The Entrance to the Kiln, (4) A Group of Art Shapes, and (5) A Group of Grotesques.



FIG. 5.—A GROUP OF MR. BARON'S GROTESQUES.

Etching Liquors for Steel Plates.—(1) Water 420 parts, mercury bichloride 15, tartaric acid 1 part, nitric acid 16 to 20 drops. (2) Spirit of wine (80 per cent.) 120 parts, nitric acid (sp. gr. 1·22) 8, silver nitrate 1 part dissolved in a little water. (3) Nitric acid 25 parts, water 60, wood vinegar 15, mercury ½ part. (4) Water 5 parts, alcohol 1, nitric acid 1, mercury 1 to 2 parts. (5) Crude nitric acid and water in equal parts. (6) Ammonium bichromate 1 part dissolved in 300 parts of distilled water, and treated with 50 c.c. of egg albumen and 2 c.c. of ammonia, the whole being beaten to a froth with a straw whisk in a deep stoneware vessel, and filtered through cotton after settling.—Specially translated from "Sprechsaal Kalender."

CHINA CLAY PRODUCTION IN THE UNITED KINGDOM.

FOR reasons not stated, the third part of the Home Office Blue Book on Mines and Quarries, giving particulars concerning the output of each kind of mineral for the year 1911, has only just been issued. Such tardy publication robs the statistics of much of their interest. We quote below certain of the figures, giving also in some cases the totals for 1910 in brackets for comparison.

CORNWALL.—China clay, 713,758 tons, £461,693; china stone, 61,692 tons. £28,491; potters' clay, 244 tons, £85.

DEVONSHIRE.—China clay, 73,818 tons, £75,477; potters' clay, 149,727 tons, £58,849.

DORSETSHIRE.—Potters' clay, 38,355 tons, £17,616.

China clay and china stone conveyed by rail and sea in tons:—Shipment of china clay and china stone, from returns furnished by the following railway companies and harbour masters:—Cornwall and Cornwall Minerals Railways, G.W.R.: Falmouth, 13,933 (9,844); Fowey, 606,470 (555,188); Looe, 1,269 (4,552); Newquay, 7,716 (5,514); Par Harbour (including Par Dock), 99,217 (111,559); Plymouth (Millbay Docks), 3,178 (2,464); Plymouth (Sutton Harbour), 80 (108). Furnished by harbour-masters:—Charlestown, 68,475 (72,638); Penryn. 684 (209); Pentewan, 23,271 (24,896); Penzance, 2,946 (5,047); Porthleven, 2,087 (3,717); Wadebridge, Padstow Harbour, 4,986 (4,986). Sent to inland towns from the Cornwall and Cornwall Minerals Railways, G.W.R., 6,625 (6,894). London and South Western Railway: Sent to Inland towns from Wenford, 2,505 (1,033); sent to various ports from Wenford, 21,965 (17,598); sent to various ports from Tresarrett, 1,817 (1,194). Total, 867,224 (827,441).

Potters' clay sent from Poole by sea and rail, in tons:—British and foreign ports, 55,925 (49,297); by railway, 1,789 (590); total, 57,714 (49,887).

THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

By One of Our Staff.

(*Continued from page* 54.)

X.—WARING & GILLOW, LTD., Oxford St., W.

WARING & GILLOW, LTD., are furnishers and decorators to His Majesty the King, and, apart from that distinction, they are one of the best known furnishing stores in London. The late W. S. Gilbert immortalised them by naming them in one of his famous comic operas, "The Gondoliers." When one of Mr. Gilbert's characters told his audience from the stage of the Savoy Theatre that they "could get everything new from Gillow's" he made a statement that was absolutely true then, and has been consistently confirmed ever since. They have a block of buildings of imposing dimensions, embodying the essentials of good design, which has been a characteristic of the house since the beginning. Waring & Gillow's is not only a company supplying everything required in the equipment of houses of every grade, but one priding itself in supplying everything of good design and sound workmanship in the most up-to-date styles. In all departments they cater, as they have always done, for those who can afford to pay for the best of everything; but they also provide for that larger section of the public who are obliged to limit their outlay, yet are desirous of living within artistic surroundings. Houses like Waring & Gillow's have taught us that things in every-day use may be at once inexpensive and artistic. Those who do not fully realise this may be induced to do so by a visit to these extensive stores in Oxford-street. There are forty departments, and the goods shown are remarkable for their good taste, variety of design, and reliable workmanship, at reasonable prices. There are departments for carpets, curtains, drapery, linens, bedsteads, pianos, glass, china, ironmongery, electric fittings, modern baths and bath-rooms, and every description of fine modern and antique furniture. To display such a varied assortment of goods they have premises covering about 40,000 square feet, and I am told that the floor space of the sales departments occupies something like eight acres in extent. The front shop windows are really arcaded passages, with handsome glass "island" cases. These cases are shaped to the curves of the different entrances with artistic effect. Island cases are not novelties in these days, but the scheme is employed to perfection at Waring & Gillow's. A striking feature of the interior is the noble Rotunda, 90 ft. high, and covered by a very handsome glass dome. The splendid showrooms of the principal departments cluster round this Rotunda on every floor from the ground floor to the seventh, and have all the advantages of a good light and plenty of air. I had a look round all of them, but I can only refer in detail to the spacious



[*Photo by "The Pottery Gazette."*

Waring & Gillow, Ltd.: Part of China Department.

China Department

on the third floor. There are convenient lifts for visitors, so that the glass and china departments are as accessible as they would be on the ground floor. These departments are under the care of Mr. S. G. Grey, an experienced buyer, and I am indebted to him for the information I am able to give respecting them. The company are to be congratulated on the extent, as well as on the beauty, of their display. It contains dainty and exclusive designs in tea, breakfast, dinner, dessert, and toilet services, and, in fact, in every description of china and glass for the proper equipment of a well-appointed home. Waring & Gillow's well maintain their reputation for keeping a fine collection of unique designs in pottery and glass. Many of these are original, and are produced expressly to their orders. There are also faithful reproductions of historic styles, which can only be obtained from Waring & Gillow's, and which enable customers with artistic instincts to select china and glass to harmonise with their furnishing scheme. The company do

not favour what is called a "cutting" trade, but they claim to supply goods in all departments at the lowest prices compatible with reliability. They show the productions of all the most famous manufacturers of china and pottery, both British and Continental, and all the usual miscellaneous household requisites of good medium qualities. There are extensive stocks of hotel ware, fireproof cooking utensils and kitchen ware. The glass department includes a unique selection of dinner and dessert services, vases for table decoration and other purposes—many of them exclusive designs of great originality and beauty. The finest crystal table suites are shown, together with a choice assortment of cut crystal flower bowls and vases. There is a good display of English crystal hand-made toilet ware.

THE CENSUS OF PRODUCTION.

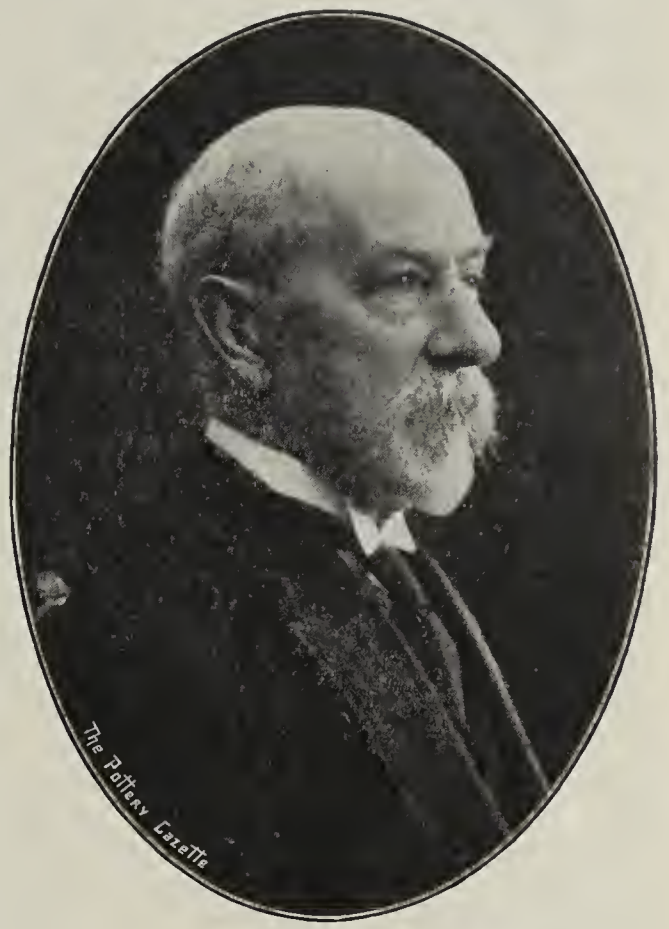
THE final report of the first Census of Production has now been issued by the Board of Trade. It constitutes a blue book of a thousand pages, and contains a series of revised tables summarising the results of the returns received under the Census of Production Act 1906, together with a report on the whole Census and reports on the various trades by the Director of the Census. The Census was taken in the year 1908 in respect of the year 1907. In the course of the year 1910-11 nine reports were published containing preliminary tables summarising the information furnished. The reports relating to the trades in which our readers are interested were dealt with in this Gazette as soon as they appeared. The tables have now been revised and particulars are also given relating to the kind and capacity of engines and dynamos owned and the quantity of electricity generated or purchased in each trade. The schedules were, on the whole, filled up in a satisfactory manner, and where it appeared that instructions had not been correctly interpreted the difficulties which resulted were adjusted by correspondence with the firms concerned. The difference between the figures given in the preliminary tables and those now submitted are not considerable in the case of china and earthenware, though there are some substantial changes with regard to the brick and fireclay trades. These in the main are due to the fact that it was necessary to prepare the former before such correspondence was complete. The totals are given as follows :—

Groups of trades.	Gross output, selling value or value of work done.	Materials used—cost.	Avg. number of persons employed (excluding outw'rk's)
Mines and quarries	£148,026,000	£28,495,000	965,230
Iron and steel engineering and shipbuilding trades	375,196,000	212,224,000	1,539,415
Metal trades, other than iron and steel	93,465,000	81,341,000	114,473
Textile trades	333,561,000	235,038,000	1,253,044
Clothing trades	107,983,000	58,185,000	756,466
Food, drink, and tobacco trades	287,446,000	197,734,000	463,701
Chemicals and allied trades	75,032,000	53,466,000	127,842
Paper, printing, stationery, and allied trades	61,308,000	26,611,000	325,475
Leather, canvas, and indiarubber trades	34,928,000	26,229,000	84,724
Timber trades	46,390,000	24,780,000	239,195
Clay, stone, building and contracting trades	116,692,000	49,679,000	725,240
Miscellaneous trades	8,288,000	3,778,000	46,874
Public utility services	77,051,000	30,786,000	342,491
	1,765,366,000	1,028,336,000	6,984,970

China Ware is mentioned in a British Consular Report from Honduras among a list of goods for which there are openings for British trade.

ROYAL HONOURS AND INDUSTRY.

IT is often remarked that in the distribution of Roya Birthday and New Year's Honours, industry and commerce do not receive recognition in proportion to their national importance. We do not begrudge the honours bestowed for political, military, naval, literary, scientific, or even histrionic services, but we think in a business nation like our own a little more recognition of the immense services of our "Captains of Industry" would be creditable to our Government. His Majesty confers titles of nobility we know, but he does not select the recipients, so no blame attaches to him for the fewness of the honours awarded to trade, commerce and industry. Our pottery manufacturers have reason to complain of their neglect when they know that their competitors in foreign countries are subsidised by the State. We have amongst us today men eminent as chemists and potters, who devote the best part of their time, and no small share of their means, to the development and improvement of the industry. The fruits of their labour are to the national advantage, and they ought to receive more official recognition than is bestowed upon them. The number of manufacturers of pottery and glass who have been honoured by their Sovereign can be counted on one's fingers.



[*Photo. by Hardee. Chislehurst.*

SIR CORBET WOODALL.

MR. CORBET WOODALL, the Chairman of James Macintyre & Co., Ltd., Washington Works, Burslem, has had the honour of knighthood conferred upon him. He fully deserves it, and we congratulate him, and wish him many years of increased activity and usefulness. He is very highly esteemed by all classes with whom he comes in contact, and particularly by his employees. It is, however, not alone, or even principally, on account of his connection with our industry that he has been honoured. He is a Governor of the Gas Light and Coke Company, London, and has been elected president of the Institute of Gas Engineers for the second time, the present occasion being the jubilee year of the Institute, and quite recently the D.Sc. degree was conferred upon him at Leeds in honour of his research work. The name of Woodall is already famous in the pottery trade. Mr. William Woodall, M.P., brother of the new knight, did much for the municipal, social and educational welfare of the Potteries, and we are sure Sir Corbet Woodall will fully maintain the honour of the name.



BOY LABOUR IN THE GLASS TRADE.

(COMMUNICATED.)

AS the result of the recommendations of the Departmental Committee appointed to inquire into the night employment of boys in various industries, a joint committee of manufacturers and employees in the glass trade have been considering the question. We gave a summary of the Report of the Departmental Committee in our last issue. There is a unanimous feeling throughout the trade that to raise the age of employment as recommended would be greatly injurious to the glass trade. A meeting of the joint committee of manufacturers and workmen was therefore held at the Talbot Hotel, Stourbridge, on Monday, January 6, when Mr. J. S. Williams-Thomas presided. Mr. Congreve Jackson and Mr. W. H. Stuart represented the manufacturers, and Messrs. Bradford, Husselbee and Bell represented the Flint Glass Makers' Society. The Chairman said if the recommendation of the Committee became law, the result would be disastrous to the Stourbridge flint glass trade. In his opinion it would be worse for the men than for the employers, since it would deprive them of the opportunity of bringing up their sons in the trade in the manner to make efficient workmen of them. He asked what were boys to do from leaving school at 14 and commencing to work in the glasshouse at 15 or 16? The recommendations of the Departmental Committee, if acted upon, would simply play into the hands of the foreign manufacturers, and the reputation of Stourbridge glass would be injured. Only one member of the Committee seemed to appreciate the position of the trade, which was explained by those who gave evidence on behalf of employers and employed. Mr. Waldorf Astor dissented from the Recommendations and signed a memorandum to that effect at the end of them. Mr. Williams-Thomas explained that he had submitted the matter to their local members of Parliament, and said that Sir Arthur Boscawen replied that the Report was very unsatisfactory and suggested that a statement signed by both employers and workmen should be sent to the press and also to the Prime Minister and other members of the Government and to the leader of the Opposition. The Hon. J. C. Lyttelton also replied saying that from inquiries he had made he did not think it likely that a Bill founded on the Report would be introduced this session, but he promised to give any assistance he could in making representations on the subject.

The Chairman said he should like the opinion of those present as to whether they should move in the matter now, or wait till the Bill was drafted.

Mr. Councillor Bradford said he, too, had been in communication with their local member of Parliament, and had received replies similar to those sent to their Chairman. He thought there were some points in which the Departmental Committee had done the men an injustice. They had coupled the flint glass trade with the other sections of the trade, such as bottle-making, pressed glass making, and sheet glass making. The Committee also said that boys in the glasshouse worked 16 hours per day, which was not true. He drew attention to the fact that on the Departmental Committee there was neither a practical glass employer nor a practical glass worker. If the Government were so foolish as to bring in a Bill founded on the Report and it became law, it would throw hundreds of glass makers out of work.

The Chairman said in his evidence before the Committee he emphasised the facts that the glasshouse was a technical school for the boys employed, and the only school in which they could properly learn their trade. Mr. Stuart and Mr. Bradford endorsed this opinion, and the Chairman added that there was nothing detrimental to a boy's health in the work of a glasshouse. He had noticed that weakly boys so employed invariably developed into strong healthy youths.

Mr. Bell supported this opinion and said the Departmental Committee had lumped all the evidence together and had not considered the special circumstances of the flint glass trade.

Mr. Congreve Jackson approved of the suggested publication of their views on this serious question. He did not think any Government would oppose the strongly expressed views shared alike by employers and employed. The bottle and plate glass sections had no more analogy to the flint glass trade, than the manufacture of china had.

It was resolved that Mr. Williams-Thomas, assisted by members of the Committee, should prepare a full and detailed statement of the facts on behalf of the trade, and should forward it to both political parties, and should also publish it as suggested for the information of the public.

MEETING AT DUDLEY.

On Jan. 11 a meeting of the District Branch of the National Flint Glass Makers' Society was held at the Crown Hotel, Dudley, to discuss the report of the Departmental Committee appointed by the Home Office to consider the employment of boys at night. Mr. W. Hampshire (vice-president of the Society) presided. Mr. W. Bradford (financial secretary of the National Society) said in the report of the Departmental Committee to the Home Office most extraordinary changes were recommended, which, if accepted by the Government, would in a very short period result in the closing of many of the glass houses in the United Kingdom. They recommended the immediate drafting of a Bill raising the ages of boys working in glass houses to 15 years, and that in 1916 the age limit should be 16. The report stated that the industry was very fatiguing and injurious to boys. He had made a calculation covering a period extending from 1852 to July last. He found that in this period upwards of 20,000 men had joined the Society or had been brought up in the industry. The average age of these men was most astonishing, being 70 years and six months. He thought no Government could require a better proof of the healthful nature of the work than was provided by these figures. Another suggestion in the report was that boys working at night should remove from one "chair" to another. A boy at a "chair" was one of the most valuable assets in its constitution. If the suggested removal of a boy from one "chair" to another were adopted, it would have an injurious effect in regard to production, and would be also injurious to the boy, because he would not be able properly to settle down to learn the industry. The Commissioners notified the Home Office that the reason glass makers objected to a boy being kept out of a glass house until 16 years of age was because they had a rule that they would not allow any glass manufacturer in the United Kingdom to apprentice a boy if over 16 years of age. The report went on to say that by enforcing new conditions respecting boy labour, it would compel the organisation to alter its rules. Whether these statements in the report were mistakes or wilful lies he would not say, but he would point out that no such rule existed, and that therefore in this matter the actual position of affairs was grossly misrepresented.

A resolution was adopted to the effect that if Parliament accepted the recommendations of the Departmental Committee appointed to inquire into the night employment of male young persons, it would be a most serious thing for the flint glass trade of the United Kingdom. They urged upon their representatives to use every legitimate means to impress upon Parliament the necessity of not interfering with the present conditions.

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

AT the monthly meeting of the English Ceramic Society, held at the County Pottery Temporary Laboratory, Stoke-on-Trent, on Jan. 11, Mr. R. Shenton occupied the chair, in the absence of Mr. C. W. Thomas (President). A severe snowstorm seriously affected the attendance. Mr. Robert S. Whipple, M.I.E.E., of Cambridge, gave a very interesting lecture on the subject of

PYROMETRY AS APPLIED TO THE MAKING OF POTTERY.

The lecturer, in opening, said that it was almost exactly seven years ago that Mr. W. S. Burton read a paper on pyrometry before that Society. In that paper an extremely good résumé was given of the types of pyrometers then available, and it was with considerable diffidence that he (the lecturer) followed Mr. Burton. His only justification was the fact that in the seven years' interval some progress had been made in the development of one or two useful pyrometers, and also in the application of pyrometry to pottery work. When he first commenced to interest himself in the measurement of high temperatures he was surprised that those who spent their lives in the making of ceramic ware apparently employed the crudest means for the measurement of their temperatures. He had learned, however, that the measurement of the temperatures of a pottery kiln was not easily made, and also that it was only recently that apparatus had been produced capable of measuring these temperatures, and of withstanding the rough treatment of an ordinary pottery works. The conclusion had, therefore, been forced upon him that the reason the potter did not employ a pyrometer was not that he was a stupid individual who did not wish to use any science in his industry, but that, being a shrewd man of business, he realised that the expense incurred in maintaining a pyrometer installation would not be remunerative expenditure with the apparatus then available.

The great potter, Josiah Wedgwood, invented in the latter end of the eighteenth century his well-known pyroscope, in which the temperature was measured by the contraction of a small sample of clay. These samples were moulded in the forms of small cylinders, which were baked until they were dehydrated, and were formed with a plain face on which to rest in the measuring apparatus. The contraction was measured by means of a gauge formed by two inclined edges, and in terms of the initial dimensions. In many ways this pyrometer was inaccurate, but assuming that the same kind of clay was always employed for the making of the cylinders, and if, more particularly, the clay was made into a dry paste and was then moulded under high pressure, a very fair uniformity in result could be obtained. He believed, however, that the use of this particular pyrometer had almost entirely ceased, although a modification of the pyrometer due to Mr. H. Watkins, of which he would speak later, was frequently employed.

About four years ago he had the privilege of spending some time in the Potteries, studying the question of the application of pyrometers to pottery kilns, and, as a result of that visit, he gathered that three things were necessary for a successful pottery pyrometer installation :— (1) Simplicity, (2) durability, and (3) accuracy. They might, perhaps, be surprised at his putting accuracy as the last claim for a scientific instrument, but after reflection, he believed that in this case they would agree with him. Accuracy was, after all, only relative, and what they in their work would not improbably consider high accuracy would be considered inaccurate and practically valueless in such work as the annealing or hardening of high-grade steels. In considering simplicity and durability, it was no good installing in a works a pyrometer outfit that required a highly skilled mechanic to operate it. The pottery manufacturer would naturally and at once say, "I cannot afford to instal delicate apparatus of this kind."

One of the great difficulties of the pottery problem was the fact that one required to know the rate at which the ware was drying in the early stages of manufacture. and he was told that the control of the temperature in the early stages was as important as in the later ones. That being the case, it was obviously essential that whatever pyrometers are employed they must be capable of covering a large range of temperature. It was now recognised that it was practically impossible to cover such a large range satisfactorily with one instrument, and two different forms of pyrometers were employed. These two forms of pyrometer were the Thermo-electric, covering a range of from 0 to 700 or 800 deg. C., and the Radiation or Optical pyrometer from this temperature to the highest temperature met with in any kiln.

As they all knew, the thermo-electric pyrometer in its present form was invented by Le Chatelier, and it depended on the thermo-electric forces developed by the conjunction of two metals when heated. Although Le Chatelier did not actually invent the thermo-electric couple, yet the platinum platinum-iridium and the platinum platinum-rhodium thermo-couples were entirely due to him, and these couples were generally known by his name. Since Le Chatelier produced the platinum platinum-iridium and rhodium couples other thermo-electric couples had been produced, amongst which must be mentioned the copper constantan, the iron nickel, and the nickel nickel-chrome. For pottery work he (the lecturer) thought that it was only necessary to consider the platinum platinum-rhodium, the platinum platinum-iridium, and the nickel nickel-chrome thermo-couples. The thermo-couple has the great advantage of simplicity, and to a temperature of 700 deg. C. that of durability and constancy. The wires of the couple are generally protected by means of a porcelain tube. which, in its turn, is protected by means of a steel sheath but in the case of the nickel nickel-chrome couple the wires are generally so robust that it is not necessary to protect them by means of a porcelain tube, an iron sheath alone being provided. In this way a robust couple is formed which may be given to the roughest of firemen for insertion in the kiln. The method of inserting the pyrometer into the kiln is a difficult one, especially as one generally wishes to continue the measurements of the temperature of the same spot to the higher temperatures. The latter temperatures can only be taken satisfactorily by means of a radiation or optical pyrometer, and the lecturer very briefly explained the principle on which one of the best known types of radiation pyrometer, viz., the Féry, depends. He afterwards explained the method of mounting this pyrometer.

In the Féry pyrometer the radiation from the hot body is concentrated by means of a mirror on to a small thermo-electric couple placed in the focus of the mirror. The heat thus concentrated raises the temperatures of the thermo-couple, and the couple in its turn creates an electro-motive force which actuates a galvanometer when connected to the thermo-couple. The electro-motive force generated by the thermo-couple bears a well-known relation to the temperature of the hot body from which the heat rays are being received. The principle of the pyrometer was here carefully explained by the lecturer.

By the theory of the radiation pyrometer, about which he said he did not need to trouble his audience, the readings were more accurate if the radiation to be measured was obtained from the interior of a hot body, so that by

good fortune the conditions met with in pottery work, in which one sighted through an aperture in a kiln, were almost ideal ones for the radiation pyrometer. The usual method of mounting the pyrometer (or actual heat measuring end of a pyrometer) was described by the lecturer as follows :—A blind fireclay tube about 4 ft. long and 6 in.



FIG. 1.

Thermo-electric Pyrometer applied to kiln.

in diameter was built into the kiln. In some cases this tube was built through the door, the closed end of the tube resting inside a broken saggar inside the kiln, so that as far as possible the temperature recorded was the actual temperature to which the ware inside the saggars was exposed. For the early part of the firing the thermo-couple was placed inside the closed tube, as shown in Fig. 1., and for the latter part the radiation pyrometer was mounted in a cover and was sighted into the closed tube, as shown in Fig. 2. The radiation pyrometer itself could also be mounted in a weather-proof hood, the pyrometer being sighted down the closed tube.

So far they had only been discussing the parts of the outfit which would produce the electro-motive force, or, speaking in telephone language, the "transmitters." It was now necessary to consider the galvanometers, or "receivers" of the installation. The electro-motive forces obtained were very small, and therefore sensitive galvanometers must be employed to receive them. Fortunately, it had been found possible to make these galvanometers so robust that the most timid of works managers need not have any hesitation in installing them. The galvanometer is of the moving coil type, the coil carrying a pointer which can be made to record its movements on a band of paper.

The lecturer here explained that there are two or three well-known types of recorder, and any of these instruments may be used. The principle in all the instruments is practically the same, viz., that the pointer makes a neat dot on the paper, either by pressing a typewriter ribbon, an inked thread, or a style on to the paper. In the instrument shown a chopper bar or guillotine hit the end of the pointer on to an inked thread, this in its turn being depressed on to the paper. The recorder is so adjusted as to be deflected right across the paper with the millivolts given by the thermo-couple between 0 and 900 deg. C., and 0 to 1,500 deg. C., with the Féry pyrometer. On the whole the lecturer thought it was advisable to employ a double recorder in pottery work, because it was possible to obtain so much more information with the double recorder than with the single one, from which only one record at a time could be obtained.

In general practice several kilns were under fire at the same time, but he thought it was only of fundamental importance to know the temperatures in two kilns, that is to say, the kiln which had just been fired, and the one in which the firing was nearly completed. It was obvious that in the first case the thermo-couple would be employed for recording the low early temperatures, and in the latter the Féry pyrometer for recording the higher or final temperatures. On the other hand, if the works could afford it (and he had little doubt it was wise economy to do so), it was advisable that the temperatures throughout the whole of the firing should be recorded.

To reduce the cost of taking a large number of records, a commutator had been designed so that one galvanometer could be made to record the temperatures attained with three different thermo-couples. A reproduction of a record obtained in this way was shown. By means of two commutators and a double recorder six records could be obtained without difficulty. A reproduction of the

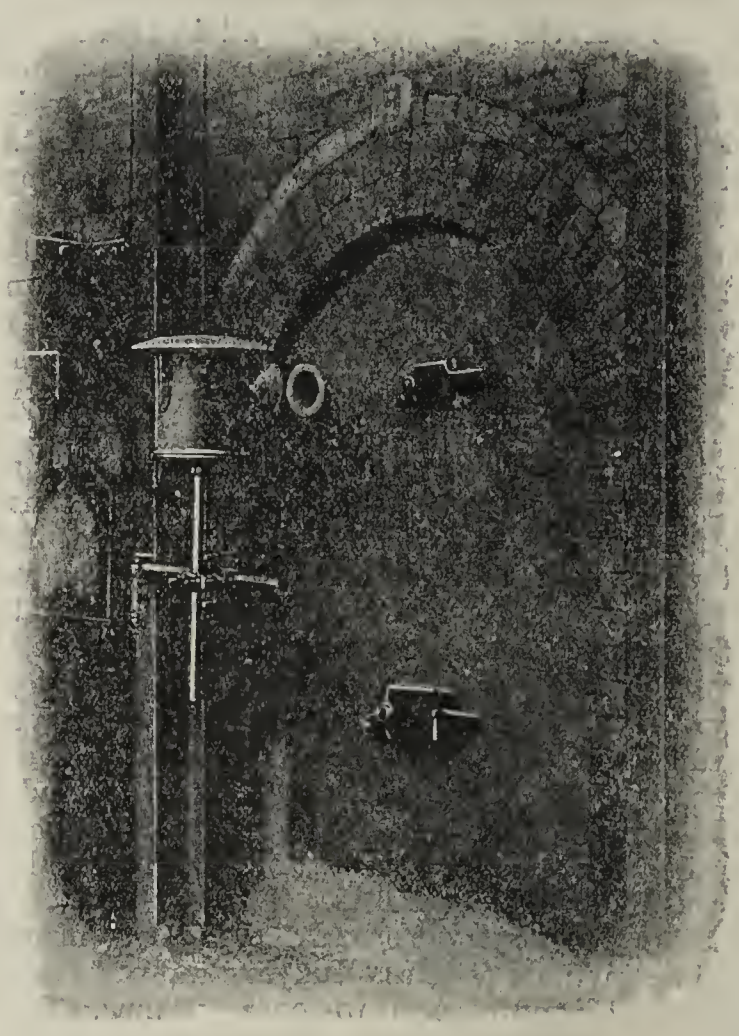


FIG. 2.

Féry Radiation Pyrometer for measuring the higher temperatures of the same kiln.

temperature record of a biscuit oven recorded over a period of six days in the works of Maw & Co., Jackfield, was shown. It was interesting to notice the very slow rise in temperature during the first day, the temperature

rising very much more rapidly during the second day, and fairly slowly during the next two days.

When a temperature of 800 deg. was recorded, the thermo-couple was removed from the tube, the Féry pyrometer being substituted for it, and the temperature up to about 1,050 deg. C. were recorded with this instrument. He believed that the temperatures obtained in these furnaces were lower than those met with in many biscuit ovens, so that the full advantage of the Féry pyrometer was not really shown. If, however, a temperature of 1,400 deg. C. had been reached (and he had measured such a temperature in a biscuit oven), then no pyrometer other than a radiation or optical one would have successfully withstood this temperature for any length of time.

It might be, however, that a small works could not afford to instal recorders, and in that case direct reading instruments might be substituted for recorders. The direct reading instrument consists of a moving coil galvanometer, the pointer of which is deflected over a scale, the temperatures being read directly on the scale. The galvanometer is provided with two scales, the first for use with the thermo-couple 0 to 700 deg. C., the second for use with the Fery pyrometer 600 to 1,400 deg. C.

A method of obtaining a very open scale by means of a strong form of potentiometer had lately been introduced, practically doubling the accuracy obtained with these simple galvanometers.

Mr. Whipple explained that the same magnification of scale can be adapted to the recorder, the difference between records obtained with the recorder fitted with an open scale and one not so fitted being shown. Both records were obtained simultaneously, and it was obvious what a large increase in the sensitivity had been obtained with the new arrangement. He supposed there were some hundreds of forms of kilns in the Potteries, and therefore it was difficult to say that a pyrometer could be fitted to all of these. But there was no doubt that a pyrometer had proved itself a very valuable adjunct to many of these kilns.

A case where a pyrometer had proved of very great service was in the control of the temperature of one of the well-known "Climax" kilns. The records obtained from this pyrometer have proved of great service, and, strange to say, in a direction in which no one anticipated. Instructions had been given that the baskets of ware should be moved forward every quarter of an hour, and whenever a new basket was drawn under the pyrometer the line on the record rose a few degrees, so that the chart not only showed the temperature of the kiln and the loss of heat by each withdrawal, but it also enabled the management to count the number of baskets passing through the kiln per hour. The first morning after the installation of the pyrometer it was found that instead of the baskets passing hrough at regular intervals, three or four baskets passed through at one time, a long pause occurring before the others succeeded. This showed at once that the firemen were not doing their duty, but were having long intervals of rest, and then rushing the work through. Another interesting example of a fireman's neglect of his kiln was proved. In this case the records were obtained by means of a radiation pyrometer, and instead of the temperature rising slowly throughout the night, the temperature was allowed to fall badly between four and five o'clock in the morning, and was afterwards forced up very rapidly. When questioned the next day, the fireman confessed that he had been asleep during the night. Personally, the lecturer thought it was a mistake to erect instruments as policemen in a works, and always urged that the fireman should be told that the apparatus was being put there in order to assist him in turning out good work; still, the fact remained that if a fireman neglected his duty the record next morning would most likely inform the management of this neglect, and it was possible to reprimand the man there and then, instead of having to wait for some days until the defective ware showed that the fireman had been negligent.

Although he had only discussed two forms of pyrometers, the lecturer said it must not be supposed that these were the only pyrometers for satisfactorily measuring pottery temperatures. He thought there was no doubt that the thermo-couple was, after all, the most satisfactory thermometer for the early temperatures, more especially as the same recorder might be used with the radiation pyrometer for the later temperatures. Nevertheless, for very accurate work resistance thermometers in conjunction with either an indicator or Callendar recorder might be employed. An additional drawback to resistance thermometers in this connection was the fact that very often a thermometer over four or five feet long was required, and the cost of such a thermometer was far greater than that of a similar length thermo-couple.

For the higher temperatures Mr. Whipple pointed out that there are several radiation and optical pyrometers from which to choose. One which is employed very largely indeed in Germany is the Wanner. This is really a simple form of photometer, in which the spectrum of a small incandescent lamp is matched against the spectrum obtained from the hot body. A great deal of good work has been done with this pyrometer, and it is a light, portable instrument. It has, however, the two great drawbacks that it cannot be employed as a recorder, and that its readings depend on the colour judgment of the observer. Another well-known type of optical pyrometer is the Holborn-Kurlbaum, in which the current through a small incandescent lamp is adjusted so that the lamp filament through which the current is passing is invisible against the hot body, on which the pyrometer is sighted. This instrument also cannot be made to record the temperature.

A third, and, he ventured to think, the most generally useful optical pyrometer was a modified form of the original Chatelier optical pyrometer, due to Féry, viz., the Absorption pyrometer. In this instrument the light from the hot body is passed through two absorbing wedges of tinted glass, and the light that passes through these wedges is matched against the light received from a standard lamp. By altering the thickness of glass through which the light rays pass, and by employing a neutral shade in the eye-piece of the pyrometer, it is possible to match the lights with a considerable amount of accuracy. Personally, he thought that this was the most suitable instrument for use in a laboratory, for determining the melting points of clays, &c., although the other two optical pyrometers previously mentioned were also very suitable for this work.

Féry had also introduced a modified form of his radiation pyrometer, in which a small bi-metallic spiral was substituted for the thermo-couple in his Radiation pyrometer. This instrument was proving of great service in gas works for determining the temperature of gas retorts, and he (the lecturer) believed it should also be of considerable service in pottery works for keeping a general control over the temperatures obtained in the works. It was portable, and a temperature could be obtained in less than a minute over a range of from 700 to 1,700 deg. C.

Mr. Burton, in his paper previously referred to, pointed out that Wedgwood was the first to suggest the determination of temperatures by means of the fusion points of mixtures of clays. Apparently Wedgwood did not develop the idea very far, but they knew how far and how ably Seger had carried the work. They (his audience) all knew far more about the practical applications of the Seger Cones than he could do, but perhaps some of them

might not know that a new scale of Seger Cones was introduced in 1910. In many ways the new cones were an improvement on the older ones. The sharpness of the melting points had been very much improved, and cones in which lead or iron compounds were used had been eliminated. Dr. Kanolt, of the Bureau of Standards, of Washington, had found that the softening temperatures of the cones varied considerably with the rate at which they were heated, but as the rate of heating in the majority of large pottery kilns was slow, this did not seriously affect the melting point of the cones.

Mr. Harry Watkin and Mr. Holdcroft (of the English Ceramic Society) had further developed the fusion thermometer, giving them very simple and practical tools. Mr. Watkin had also developed the original contractional device of Wedgwood, so that with a simple micrometer and various precautions in the preparation of the clay samples, he had produced a tool of some considerable utility. Thanks to Professor Féry, and two or three other scientific workers, the instrument maker is now able to provide the potter with a pyrometer outfit which will be found to be comparatively inexpensive, both in first cost and upkeep, and at the same time durable and accurate. By means of the pyrometer he is enabled to control his firing, and thus to improve the uniformity of quality of his product in a way which was quite impossible five or ten years ago.

A very interesting discussion followed the lecture, in which the chairman, Dr. Mellor, and other speakers took part. Dr. Mellor said the double thread recorder was used in the County Pottery Laboratory, and he would certainly not like to be without it. He thought potters were often blamed for being behindhand in their methods, because they were not anxious to get their names into print. A lot of useful work in the direction of pyrometry had already been done by insignificant potters in that district, which was not heard of, and he cited several instances of discoveries which had been made by potters in certain directions, the credit for which had been taken in text-books on physical-chemistry by others at a much later period. The value of a good pyrometer in pottery work has been repeatedly proved.

A vote of thanks to the lecturer was proposed by Mr. J. A. Audley, seconded by Mr. G. Blair, and unanimously accorded, Mr. Whipple responding.

COMMUNICATIONS FROM THE COUNTY POTTERY LABORATORY OF STAFFORDSHIRE.

XLI.—FIVE FALLACIES IN POTTING.*

By Bernard Moore and J. W. Mellor.

FOR our purpose a statement is considered to be fallacious if it wittingly or unwittingly deceives or gives a false impression. We desire to bring forward a few statements which are sometimes advanced as if they were generally true, whereas they may be but partially true, ambiguous, or false. Our intention is rather to provide subjects for discussion than to bring forward any particularly novel ideas. Some others may be given on a future occasion.

1.—*That an excess of air in the atmosphere of an oven when it is firing proves that the ware has been fired under oxidising conditions.*

The term "excess air" is generally employed for the air which is present in the atmosphere of oven or kiln above and beyond that needed for the complete combustion of the fuel. A considerable amount of difficult work has to be done by the air in a biscuit oven. Not only is air required for burning the fuel, but also for burning out the organic matter in the clays; and, in a bone china oven, for preventing the early decomposition of the "bone"; while in buff and terra-cotta ovens, the colour of the body is dependent on the excess air. In an oven containing a large amount of flat ware, the air must travel through the walls of the saggar, through the placing sand or flint, and into the ware itself. There the organic products are oxidised. The products of the oxidation must diffuse back into the oven and make way for fresh supplies of air. All this takes time. If moisture be present it will oppose the passage of air into the interior of the saggar, and, if an abnormal amount be present, the air may not have had time to do its work in the body before the temperature of the oven has reached the temperature of vitrification. Moisture in bedding flint may also cake the flint and make it less permeable. Suppose there is an unusual amount of moisture in the saggars. There may be nothing to lead the fireman to suppose that the oven must be kept below the vitrifying temperature longer than usual to allow for the more tardy oxidation which arises owing to the additional work needed to displace the usual amount of moisture in the saggars. The result will be that the ware appears as if it had been under reducing conditions, when in reality the usual excess of air had passed through the oven. The same remark would apply if a new ball clay or a new bone containing an unusual amount of carbon had been used. The extra work needed could not be done in the time. Hence, arise the faults, "black cores," "brown earthenware," "blue china," &c.

Obviously, other things being equal, the greater the excess of air, the faster it is able to do its work. Under the conditions which prevailed in his own ovens, Mr. Wilson found that the work was done satisfactorily with about a 50 per cent. excess, but not with a 37 per cent. excess. Hence, so far as the ware is concerned, reducing effects can be obtained, although a considerable excess of air be present in the atmosphere of the oven.

2.—*That the addition of a "bit of lead" will improve any glaze.*

There are a lot of puerile arguments urged for and against leadless glazes. "Lead" is not a universal panacea, a universal cure all, because the addition of "lead" to certain types of glazes may spoil them. We refer to those types of leadless glazes high in alumina. Such leadless glazes, for instance, as

$$\left.\begin{matrix}0{\cdot}4(NaK)_2O\\0{\cdot}6CaO\end{matrix}\right\} \quad 0{\cdot}55Al_2O_3 \quad \left\{ 3{\cdot}5SiO_2 \right.\\ \left. 1{\cdot}0B_2O_3 \right.$$

may be ruined by the addition of the proverbial "bit of lead."

3.—*That the colour of a fired china clay is solely dependent upon the per cent. of "iron oxide."*

We have noticed that some clays with, say, 1·7 per cent. ferric oxide fire a better colour than clays with 1·4 per cent. The colour of a fired clay depends not only on the amount but also on the form in which the iron exists in a clay; some forms of iron are relatively stable when the clay is fired, other forms burn red or brown. Thivier's earth and Wetley marl may be cited as extreme examples. Clays containing similar amounts of "iron" may give very different *colours* when fired under similar conditions, the iron may be combined with the silica and gives a reddish or yellowish tinge; in other clays, the iron may replace part of the fluxes and when fired be nearly colourless; and in others the iron may be free, and when fired from dark, slag-like spots, some clays with a high percentage of titanic oxide aggravate the discolournig effects of iron in a remarkable way.

There is also an interesting relation between the amount of lime and the colour furnished by a given amount of iron in a clay. The effect of lime is also dependent upon the way it exists in a clay. A small amount of free lime may bleach the iron before it slags, and it may also prevent the slagging of the iron early in the firing.

There is no need to dwell on the effect of different kinds of atmosphere on the colour furnished by a given clay; nor on the effect of the speed of firing on the colour; nor on the effect of different glazes on the colour of bodies.

4.—*That the refractoriness of a frit-kiln brick is the criterion of its efficiency.*

There is no particular difficulty about the refractoriness of frit-kiln bricks, since they are easily obtained more refractory than is needed for the purpose. A frit-kiln brick has to do other work than merely resisting temperature. Given two bricks equally refractory so far as the squatting of Segar cones is concerned, and not very different so far as ultimate composition is concerned, they may behave very differently when in contact with the fluxes. We are fairly well agreed that the frit attacks the brick—in a kind of underhand way—by entering, widening, and deepening the pores, cracks, and the joints of the bricks. Assuming the joints are perfect, the more vitreous the brick, other things being equal, the better will it withstand the corrosive action of the frit. The texture of a brick requires more attention than refractoriness, because the latter quality is more readily obtained than the former. Of course the more vitreous bricks are particularly liable to split and chip.

A vitrifying refractory clay, if not thoroughly shrunk when the brick is fired, is liable to have a large contraction when afterwards heated. Imperfectly shrunk bricks, made from clays very suitable for frit-kiln bottoms, are a source of danger, because they may have a relatively large shrinking when afterwards fired. This may open the joints between the bricks and so offer an easy path for the frit to attack the brick. To get the full advantage of the vitrifying property of clays most suitable for frit-kiln bricks,

* From *Trans. Eng. Cer. Soc.*, 11, 178, 1912.

obviously the bricks should also be well shrunk, and of uniform shapes and sizes.

5.—*That a vitreous sample of "bone" contains more alkali than a less vitreous sample.*

If two samples of bone containing the same amount of alkali be tested in the usual way under similar conditions, that sample containing the more fine silica will be the more vitreous. (1) It is certain that the silica just over cone 10 decomposes bone ash, forming a fusible lime silicate. (2) If alkali be present, as well as finely divided silica, a fusible alkali silicate is formed; (3) if the alkali be present, without much fine silica, a relatively large proportion of the alkali will be volatilised.

This all means that finely divided silica is a more important factor in producing vitreous samples, which are often viewed with suspicion, and which is frequently attributed to alkali.

THE POTTERY AND GLASS TRADES' BENEVOLENT INSTITUTION.

THE report of the Board of Management and statement of accounts and balance sheet for the year ending Dec. 31, 1912, presented at the annual general meeting at the First Avenue Hotel, Holborn, on Jan. 28, is appended. Mr. J. C. Bailey took the chair at the meeting in the unavoidable absence of the President. A report of the proceedings will be given in our next issue.

ANNUAL REPORT, 1912.

In accordance with custom, the Board of Management has pleasure in submitting to the donors, subscribers, and members its report, together with the auditors' certified statement of accounts and balance sheet for the year ended Dec. 31, 1912.

The Board has every reason to feel satisfied with the progress made during the year under review; the roll of members and subscribers continues to make steady progress, particularly in the number of firms who have become annual subscribers. The roll now stands: Members 507, subscribers 254, total 761; a net increase in the year of 139. Five deaths have occurred, 12 resignations have been accepted, and 19 members have been struck off, these being two years in arrears and taking no notice of communications sent them.

The donations, although in themselves less than last year, compare favourably with previous years, and the Board feels that grateful thanks are due for the continued generous support again extended to the Chairman's Festival Dinner list. This gathering is undoubtedly appreciated by the Trade, as is evidenced by the yearly increase in the attendance, and, to quote from THE POTTERY GAZETTE, "was much more than a charity dinner, it was a most important trade function, that will have many and far-reaching effects."

To Lord Harrowby the Board tenders, in the name of the Institution, its grateful thanks, not only for his taking the chair on that memorable occasion, but also for the handsome gift of £50; to Mr. Minton Goode, who occupied the vice-chair; to the gentlemen who so kindly came forward to serve on the Dinner Committee, and the large and distinguished company who supported his Lordship, the Board is much indebted.

It is felt that the Festival Dinner should not pass into history without a record being made of the services rendered by Mr. Ronald D. Doulton, whose untiring labours largely contributed to the success achieved.

The Board desires to thank those families who, through the means of "In Memoriam" donations, are perpetuating the memory of well-known and respected members of the Trade, and especially thank Mrs. R. Benham, Mrs. Dale, and Mrs. George Stuart in this connection.

The past year witnessed the removal of the office to 3, Dyers'-buildings; in consequence a charge for rent appears in the accounts; this change was brought about through the increase in the work and the need for more office accommodation; reluctant as the Board was to incur the additional rent charge, it came to the decision, after most careful consideration, that the best interests of the Institution would be served by making the move. The Board desires in connection with this change to express its indebtedness—an indebtedness that should be shared by every member—to Green Bros. for their disinterested generosity in having provided office accommodation entirely free of rent since 1909.

The new offices are held under a seven-years' lease at £55 a year, and the Board desires the members to know that, in connection therewith, the whole of the furnishing and equipment has been provided by the members of the Board and a few friends, at their personal expense, so that the funds of the Institution have not been called upon for that purpose.

The Fragile Club, which has ceased to exist, at its dissolution presented the Institution with a very handsome Board-room chair, by which the memory of the parent Institution will always be perpetuated.

The Board has pleasure in directing attention to the continued increase of the work, not only connected with rendering assistance to members in distress, but also with the Employment Bureau; this latter, although great difficulty is experienced in making it generally known, will, it is felt, even if the progress be a slow one, ultimately become a most useful and live agency in the scheme of benevolence. Following the wise precedent set, no names are published of the recipients of temporary assistance, but the members can rest assured that the whole of the £84 15s. 9d. has been wisely distributed, after a most careful scrutiny of each case; and the genuine gratitude of those assisted confirms the Board's opinion of the wisdom and soundness of this form of benevolence.

At the general meeting in July last, four new pensioners were placed on the fund without a ballot, a matter upon which the Board offers sincere congratulations; and during the year Mrs. M. A. Biddlecombe, one of the pensioners, died. The total amount distributed in 1912 for pensions, temporary relief, and grants to orphans is £575 14s. 5d.

In accordance with the recommendation of the Benevolence Committee, to whom was entrusted the investigation of the annual returns, the Board confirms in their pension during 1913 the following:—Mr. Edward Belcher, Mr. William Bloss, Mrs. Sarah Louisa Bourne, Mrs. Mary Jane Brand, Mr. W. Carroll, Mrs. Charlotte Charlton, Mrs. Mary Jane Davey, Mrs. Mary Elizabeth Fox, Mrs. Sarah H. Griffin, Mrs. Sarah R. Harrison, Mrs. Louisa Hawkins, Mrs. Josephine Hurten, Mr. Edward W. Jones, Mr. James King, Mrs. Emily Landon, Mrs. Sarah Maria Luck, Mr. Matthew Mann, Mrs. Louisa Proft, Mrs. Elizabeth Richards, Mrs. Margaret Saines, Mrs. Ellen Shee, Mrs. Ellen Shirley, Mr. H. J. Simpson, Mrs. Annie Smith, Mr. James Stanway, Mrs. Elizabeth Twemlow, Mr. D. Vince, Mrs. Anne Wright.

In conjunction with the greater interest taken in the welfare of the Institution, a large increase of office work has resulted, and in order that this may be carried on in an efficient manner the Board, during the early part of the year, entered into fresh arrangements with Mr. James, by which, at an increased remuneration, he now gives more time to the Institution.

The Board wishes to bring before the members the assistance it has received from both the Potteries and the Glass District Committees; from time to time matters crop up in these areas which, but for the help afforded, would be most difficult to satisfactorily deal with; to Mr. C. H. Bowers, the Chairman, and to Mr. Warwick Savage, the Hon. Sec., in the Potteries; and to Mr. W. H.

Stuart, the Chairman, and Mr. S. M. Stuart, the Hon. Sec., at Stourbridge, the Board tenders its very grateful thanks for their valued services; and also takes this opportunity of expressing its appreciation of the services of the Secretary, Mr. J. G. W. James, who has at all times proved himself zealous and ever ready to carry out any suggestion made in the interest of the Institution.

The financial statements afford cause for thankfulness; after the distribution of the assistance already referred to, and providing for all management expenses—printing, postages, stationery, &c.—there is a balance of £419 17s. 8d., this after having increased the permanent invested fund in accordance with the directions given at the last annual general and general meetings by the purchase of £300 India 3 per cent. stock (costing £239 12s. 6d.).

The Board particularly draws attention to the investment of income account. This reserve fund, which came into existence with the new rules, is proving a wise innovation, and one that deserves all the support that can be given; by its maintenance the Board have cash within easy call, in the event of any great run of distress or any unexpected emergency, without the expense and delay that must be incurred should the permanent invested fund ever have to be drawn upon.

The Board would also refer with deep regret to the loss sustained by the death of Mr. C. J. Dale, one of the Governors appointed in 1911. As Chairman of the Board in 1910 he rendered great service to the Institution, and by his genial manner, tact, and ability, endeared himself to his colleagues and friends. Death has also claimed Mr. F. R. Benham, Mr. R. S. Burgess, Mr. Alderman Murray, and Mr. Fred Stuart, all generous friends.

Messrs. John Jenkins, O. M. Doulton, and Edwin Lawson are retiring from the Board; they have rendered valuable assistance, and the Board desires to thank them. The other members offer themselves for re-election, and to fill the vacancies the following nominations have been received:—

Mr. Alexander J. Dale (J. Bourne & Co.); Mr. Jules C. Houdret (De Grelle, Houdret & Co.); Mr. R. C. Lampard (Junior Army and Navy Stores); Mr. José S. Lewis (Mortlocks, Ltd.); Mr. Felix W. Lloyd (Jones & Higgins); Mr. Charles J. Pratt (National Glass Co.).

The Board desires to place on record its sincere gratitude to the President, the Earl of Harrowby, for the honour he confers on the Institution by being the President, and begs to assure his Lordship that his interest in the work and sound advice are, and always will be, most keenly appreciated.

To Messrs. Jules Wuidart, Minton Goode, and J. S. Williams-Thomas, the Trustees; to Mr. H. Spencer Daniell, the Treasurer; and Vandercom & Co., the Solicitors, the Board tenders its best thanks.

The Board also desires to express its appreciation of the valuable services rendered by Mr. W. G. Savill, the Chairman, during his year of office, and in order to give a tangible proof of this, do nominate him (under the power given by Rule 55) a Governor, and submits his name to the annual general meeting with an assurance that he will be unanimously elected to that high position.

To Mr. Rhodes, the Vice-Chairman, and to Mr. G. D. Francis, his deputy, the Board also tenders grateful thanks for their constant help.

Basil Hallett & Co. offer themselves for re-election as auditors.

The Board earnestly appeals to all members to help forward the work, and sincerely trusts that increased interest and support will be forthcoming during this New Year, in order to maintain the continued increase of membership, as well as to provide the necessary funds to meet the ever-increasing demands for help, which will of a certainty be made, the more widely known the Institution becomes.

(Signed) W. G. Savill, Chairman.
William Rhodes, Vice-Chairman.
Geo. D. Francis, Deputy Vice-Chairman.
H. Spencer Daniell, Treasurer.
J. Geo. W. James, Secretary.

Income and Expenditure Account for the Year Ending December 31, 1912.

Dr.	£ s. d.	£ s. d.
To Management Expenses—		
Rent of office, lighting and heating ..	36 16 3	
Secretary's salary, and commission and clerical assistance	173 0 8	
Printing, stationery, and advertising..	63 18 6	
Postage	26 12 6	
Travelling	—	
General expenses, London and the Potteries	75 12 1	
Audit fee	3 3 0	
		379 3 0
To annuities and relief		575 14 5
To Balance carried to Accumulated Fund: Excess of Income over Expenditure for the year ending Dec. 31, 1912 ..		419 17 8
		£1,374 15 1

Cr.	£ s. d.	£ s. d.
By annual subscription (exclusive of subscriptions in arrear) 1910	0 18 6	
Ditto, 1911	4 9 0	
Ditto, 1912	419 8 6	
		424 16 0
,, Donations		708 5 6
,, Interest and dividends on investments		229 11 6
,, Interest on deposit		9 14 3
,, Sundry receipts		2 7 10
		£1,374 15 1

Balance Sheet, December 31, 1912.

Dr.	£ s. d.	£ s. d.
To Accumulated Fund—		
Balance Jan. 1, 1912	7,621 16 3	
Add Excess of Income over Expenditure for the year ending Dec. 31, 1912	419 17 8	
		8,041 13 11
To Sundry Creditors		69 2 8
		£8,110 16 7

Cr.	£ s. d.	£ s. d.
By Cash—		
At Bankers on Current Accounts ..	249 0 3	
On Deposit	705 0 0	
		954 0 3
By Investments on Capital Account, at Cost—		
£3,804 14s. 7d. 3½ per cent. India Stock	4,266 11 3	
£400 New Zealand 3½ per cent. Stock..	414 17 0	
£500 Metropolitan Consolidated 3½ per cent. Stock	495 1 0	
£796 Great Western Railway 4 per cent. Debenture Stock	934 13 4	
£200 Great Northern Railway 3 per cent. Preference Stock, 1899 ..	179 12 11	
£250 New South Wales 3½ per cent. Stock	243 16 0	
£300 India 3 per cent. Stock	239 12 6	
		6,774 4 0
By Investments on Income Account, at Cost—		
£300 South Australian 4 per cent. 1916-35 Stock		303 15 0
,, Interest on Investments accrued due		68 7 4
,, Office Furniture, as per last Account		10 10 0
		£8,110 16 7

We have examined the above Income and Expenditure Account or the year ending Dec. 31, 1912, and the Balance Sheet at that date with the books and vouchers of the Institution, and certify same to be correct. We have verified the Investments and the Balances at Bankers.

Basil Hallett & Co., Chartered Accountants,
2, Snow-hill, London, E.C., Jan. 13, 1913. Auditors.

Obituary.

FREDERICK J. RADFORD, Aged 40.

WE deeply regret to record the death of Mr. F. J. Radford, of the firm of S. Radford & Sons, china manufacturers, High-street, East Fenton. Mr. Radford died after a short illness on the morning of Jan. 11 at his residence, Westholme, Lightwood. His comparatively sudden death was a severe shock to his family, who had no reason to expect such a speedy end to a promising career. The deceased was present at the dinner of the China Manufacturers' Association at Longton, on Jan. 8, when he seemed to be in his usual health. On the following morning he was taken ill, and a medical gentleman was sent for. The attack, however, quickly assumed a serious aspect, and did not yield to the treatment, though everything that could be done for him was done by his doctor and his family. He was not able to resist the attack even temporarily, and gradually became worse, till he passed away, as stated, on the Saturday following the seizure, to the great grief of his family and many intimate friends. Death is always a painful visitor, but the suddenness of Mr. Radford's end has evoked the deepest sympathy for his widow and daughters. Such a blow is severe even when a prolonged illness has led a family to look upon it as to be expected at an early date, but when it falls with only a few hours' warning, it is increasingly distressing to the survivors. The deceased was the youngest son of Mr. Samuel Radford, who commenced business at Longton, and eventually built the works now occupied by the firm at Fenton. The deceased joined his father on leaving school, and has been engaged in the industry all his business life. Like his father, he has always taken great interest in china manufacture, and as a member of the China Manufacturers' Association he has exerted himself to improve the conditions of working the industry in the interests of the trade generally and in those of the workers. He loved manly sports, and was an active member of the Fenton Cricket Club, of which he was president up to the date of his death. He was also chairman of the Meir Golf Club. The deceased was on the committee of the Fenton Conservative Club, and took an active interest in the work of the Dresden Church. The funeral took place at Dresden Church on Wednesday, Jan. 15, in the presence of a large number of relatives and acquaintances. We offer our sympathy to the members of the family and the firm.

Death of Mr. Daniel Lingard.—We regret to announce the death of Mr. Daniel Lingard, which took place on Jan. 12 at his residence, Clowes Villa, Alsager, Tunstall. The late Mr. Lingard was the senior member of the firm of Lingard, Webster & Jones, of Swan Bank Pottery, Tunstall, manufacturers of teapots, hot-water jugs, &c., in Rockingham, Samian and jet, a house well known in the trade. Mr. Lingard was 68 years of age, and had devoted the greater part of his life to the development of the business. For upwards of three years he had suffered from a painful illness which he endured with resignation. He did much active work among the Primitive Methodists, by whom he was greatly respected. For several years he was steward of the Alsager Circuit, and was also treasurer of the local orphanage fund. He was superintendent of the Sunday school and officiated as organist and choirmaster in the early years of the Methodist Church in Alsager. He represented the district on the Synod and Annual Conference. The funeral took place at Christ Church, Alsager, on Jan. 15, after a service held in the Methodist Church. Alsager, where he had been in the habit of worshipping, In addition to the relatives a large assembly of members of the trade and local residents attended to show their respect for the deceased.

Death of Mr. Joseph Wiley.—The death is announced of Mr. Joseph Wiley, one of the earliest glass and china dealers in Llandudno. Mr. Wiley, who was ninety years of age, died at Marlborough, Wiltshire. His first shop was at 145, Upper Mostyn-street, Llandudno, and the business was moved to 91, Central Mostyn-street, and was carried on by his son until it was disposed of to Mr. F. Holland, his former manager. Mr. Wiley went to Llandudno at the time it first became known as a health resort. He was greatly respected by all who knew him, and though he had long since left the neighbourhood he retained his connection with the town until he died. The funeral took place at Marlborough on Jan. 8.

Recent Researches on Siloxide Glass.—Siloxide glass is claimed to be an improvement on quartz glass for the manufacture of tubes, glasses, vessels, muffles, and other articles requisite for the production of chemicals, and consequently obliged to withstand the action of great heat and concentrated acids. The new product is an advance on quartz glass, just the same as the modern hardened steel armour plate is a development of the old iron plate. The raw material of quartz glass is washed quartz sand, containing about 95 per cent. of silica, and this material is fused in an electric furnace at a temperature of about 1,000 deg. C. By the aid of compressed air, steam and gases—all auxiliaries used in the glassmaking industry—it is now possible to fuse as much as 30 to 35 lbs. of quartz at a time, and work it up into all manner of shapes. One of the most valuable properties of quartz glass prepared in the electric furnace is its power of withstanding the action of boiling acid (except hydrofluoric acid). Moreover, the coefficient of expansion of quartz glass is only 1-17th per cent. that of the best glass used for chemical vessels. On the other hand, quartz glass is attended with the defect that, at high temperatures, it passes from the amorphous into the crystalline state, a change accompanied by a considerable diminution in hardness. This defect, which hitherto could not be removed, has now been obviated by the invention of Dr. Wolf-Burckhardt, whose new process—expressed briefly—consists in adding to crude quartz, solutions of zirconium oxide, tantalum oxide, or other sparingly soluble oxides, so that a vitreous substance is produced which melts at about 1,750 deg. C. In comparison with ordinary quartz glass, this new product has a tensile strength about 30 to 50 per cent. higher, and a crushing strength about 40 to 60 per cent. higher; and in addition, it does not change into the crystalline condition at high temperatures, the devitrification being only about 50 per cent. that of quartz glass. The investigations carried on by Dr. Felix Thomas on this new product are not yet terminated, but, according to "Bruhns Fachblatt," the results already obtained show conclusively that it undoubtedly possesses the above-named points of superiority. The addition of the highly refractory metallic oxides not only raises the melting point, but also seems to produce a very important change in the condition of aggregation. The results also show that the subject is not yet exhausted, and that further success awaits the strenuous experimenter, especially in respect of the correct additions of the refractory oxides to suit different purposes.

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (British Products) FOR MONTH AND YEAR ENDING DECEMBER 31, 1912.

		Quantities.				Value.			
		Month ended December 31.		Twelve Months ended December 31.		Month ended December 31.		Twelve Months ended December 31.	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.
To Germany	cwts.	4,016	3,786	59,509	53,513	£6,937	£7,504	£80,741	£73,592
,, France	,,	5,016	6,019	94,248	82,344	8,359	8,755	87,015	99,811
,, United States of America	,,	17,231	15,604	292,677	264,282	28,374	25,470	427,886	399,939
,, Brazil	,,	29,512	78,191	322,064	438,536	17,155	32,206	211,755	234,056
,, Argentine Republic	,,	50,327	45,001	486,693	382,278	25,643	26,955	279,226	265,838
,, British South Africa	,,	10,774	8,031	143,394	127,372	12,270	10,326	132,720	132,230
,, British East Indies	,,	28,160	32,974	384,100	383,368	22,310	20,463	233,130	229,237
,, Australia	,,	21,280	29,593	266,492	268,704	27,066	34,869	308,852	324,413
,, New Zealand	,,	8,099	10,600	90,949	97,687	11,025	14,669	124,603	132,741
,, Canada	,,	26,905	39,324	526,631	618,259	25,410	33,387	395,124	468,463
,, Other Countries	,,	95,593	89,422	1,328,320	1,140,818	65,032	69,891	748,332	791,266
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	,,	1,607	1,782	17,329	18,034	16,212	18,523	174,859	176,522
Floor Tiles for Tesselated Pavement	,,	8,725	5,463	92,907	76,246	8,282	5,281	85,439	72,915
All other Tiles (except Roofing and Street Paving)	,,	9,184	16,665	128,690	164,920	9,340	16,611	115,711	158,599
Sanitary Ware	,,	32,144	33,587	360,358	374,375	38,597	48,139	460,915	529,469
Electrical Ware, Door Fittings, and Chemical Ware	,,	8,282	4,248	64,697	47,042	4,162	4,712	50,909	45,176
Other Earthenware (including Semi-Porcelain and Majolica)	,,	113,683	116,570	1,391,149	1,391,576	153,061	156,566	1,828,608	1,846,480
Jet, Rock'm, and Glazed Terra-cotta	,,	158	652	4,683	8,892	332	741	6,238	8,583
Red, Stone, Brown and Yellow Ware	,,	123,130	179,578	1,935,324	1,776,076	19,595	33,922	306,705	313,842
GLASS.									
To British South Africa	value £	—	—	—	—	8,011	7,651	100,779	114,226
,, Other Countries	,,	—	—	—	—	139,159	151,249	1,583,135	1,709,044
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	15,546	23,088	210,483	231,549	29,256	36,105	357,634	393,508
Flint Glass	,,	7,528	7,250	83,457	87,385	24,906	27,387	270,975	299,341
Glass Bottles	gross	70,539	88,820	936,222	1,031,489	44,941	54,831	589,171	643,083
Glass Manufactures, other sorts	cwts.	62,727	50,093	631,274	649,422	48,067	40,577	466,134	487,338

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR MONTH AND YEAR ENDING DECEMBER 31, 1912.

Porcelain, Chinaware, and Parian	cwts.	2,728	4,902	53,641	44,345	13,525	22,883	265,875	216,581
Floor Tiles for Tesselated Pavement	,,	241	22	724	546	120	44	923	655
All other Tiles (except Roofing and Street Paving)	,,	5,534	2,639	55,599	31,024	2,281	1,660	24,603	19,212
Sanitary Ware	,,	11	—	242	307	28	—	355	655
Electrical Ware, Door Fittings and Chemical Ware	,,	2,495	2,614	22,972	28,144	3,820	4,401	39,229	43,985
Other Earthenware (including Semi-Porcelain and Majolica)	,,	27,173	30,768	312,576	331,135	55,731	62,428	610,734	663,492
Jet, Rock'm, and Glazed Terra-cotta	,,	22	—	232	351	66	—	544	1,019
Red, Stone, Brown and Yellow Ware	,,	38,007	20,184	310,953	231,308	6,200	5,893	52,620	52,606
Window and German Sheet Glass	,,	121,825	127,214	1,214,632	1,332,273	71,493	70,112	697,644	763,328
Plate Glass	,,	24,534	37,784	331,743	351,714	30,648	44,719	413,164	435,846
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	,,	81,456	80,581	845,014	877,609	121,918	118,084	1,258,568	1,310,730
Glass Bottles	gross	155,110	168,961	1,571,462	1,734,745	69,720	75,867	676,479	755,535
Glass Manufactures, unenumerated	cwts.	1,244	433	7,199	16,228	1,027	678	8,345	15,635

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR MONTH AND YEAR ENDING DECEMBER 31, 1912.

Porcelain, Chinaware, and Parian	cwts.	624	1,560	24,291	13,894	3,043	7,891	121,702	73,851
Of all Other Sorts	,,	380	1,291	9,681	9,611	822	1,189	15,215	13,953
Window and German Sheet Glass	,,	793	1,194	9,593	11,160	332	992	5,129	6,973
Plate Glass	,,	367	215	2,380	4,840	450	339	3,085	7,180
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	,,	713	463	12,227	11,955	3,059	1,542	34,052	32,822
Glass Bottles	gross	2,709	4,968	40,911	43,698	2,020	2,436	23,478	23,037
Glass Manufactures, unenumerated	cwts.	13	86	821	1,516	30	130	755	1,654

EARTHENWARE EXPORTS TO THE UNITED STATES.

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Nov. 28, 1912, to Dec. 31. Packages.	Corresponding Period, 1911. Packages.	Exports Jan. 1 to Dec. 31. Packages.	Corresponding Period, 1911. Packages.
Boston	425	630	6,638	7,678
New York	982	897	10,199	8,240
Baltimore	289	575	8,149	10,716
Philadelphia.....	190	109	2,898	4,082
New Orleans.....	19	81	1,092	938
Newport News...	6	—	75	153
San Francisco ...	117	177	1,479	862
Portland, Maine.	297	136	1,010	715
Galveston	23	54	601	975
Portland, Oregon	11	19	383	99
Inland Points ...	58	53	836	1,162
Total	2,417	2,731	33,360	35,620

VENTILATION IN POTTERIES.

(SPECIALLY CONTRIBUTED.)

THE fact that dust removal and general ventilation occupy such a prominent place in the new Regulations will, of necessity, bring these questions very largely before the pottery manufacturer during the next few months. It is in the hope of giving some general information that may be of use in enabling the potter to see that he gets value for his money from the ventilating engineer that this article has been written. In the first place it must be admitted that many of the installations, at present in use for the removal of dust in potteries, are badly designed for the work required, and do not compare favourably with like appliances in other trades. This is undoubtedly due to the fact that the manufacture of earthenware and china was the first trade in which exhaust ventilation for dust removal was required, while the science of ventilation has only come to be properly understood since these installations were put in. The fault, therefore, does not lie altogether at the door of the long suffering potter.

Speaking broadly, the two mistakes to which all the trouble is due are (1) the almost universal use of the propeller fan, and (2) badly designed wooden ducts for carrying the dust from the benches to the fan.

Dealing with these points in order, let us first consider fans.

There are two types of fan that can be used for this work, the propeller and the centrifugal. The former is the common type, with blades shaped something like the propeller of a ship; broadly, this fan is designed to move large volumes of air, but it is unable to do this against anything above the smallest resistance, i.e., it is eminently suitable for ventilating a large hall by abstracting foul air high up in the roof, but is useless to pull air along narrow and tortuous ducts.

The centrifugal, on the other hand, is shaped like the ordinary blower of a smith's forge; primarily it is designed to overcome resistance. For instance, it will suck air at a high velocity through lengthy ducts, but it will not move a large volume of air; a typical case where these fans are necessary is in the ventilation of mines.

It is obvious that something between these two types would be the best for pottery work, and fan makers have long been endeavouring to perfect a fan that will move a moderate amount of air against a moderate resistance, the pressure being sufficient to create a velocity that will carry dust along the ducts. Many firms have now fans of this description on the market. In the writer's opinion, the best and cheapest results will never be obtained unless this centrifugal type of fan is used in all cases where dust has to be removed and where the ducts from the benches to the fan are more than 10 ft. in length.

The only process in which the propeller type can be used, without a great waste of power, is in that of colour blowing, and in this case good results can only be obtained by having one fan to every two hoods. Propeller fans, however, are eminently suitable for the general ventilation foreshadowed in the rules relating to dipping houses and drying rooms, where a current of air has to pass from the workers to the ware, and possibly the numerous propeller fans now in use could be profitably employed in this way.

Now to turn to the second point—the design of ducts. Let us admit at once that the old-fashioned wooden ducts, so often found in potteries in North Staffordshire, are now entirely condemned by modern practice, and a great saving in fan power could be effected by the almost entire use of circular metallic ducts.*

The whole point aimed at in modern design, is to allow the air to travel from the bench to the fan along the easiest possible path, that is, the path that will offer the least friction to the dust-laden air. The friction of the air in the ducts is the pull which the fan has to overcome, and it is due to (1) friction of the air against the sides of the ducts, and (2) eddies set up in the air at sharp bends and where branches enter the main duct. To lessen the first of these causes, the ducts are made circular, since a circular pipe offers the least surface for a given cross section. The inside should also be smooth; a good surface is obtained by the use of galvanised iron. To lessen the eddy effects, all sharp bends must be avoided, and where turns are necessary they should be carried round in a gentle curve. Branch ducts should slope towards the fan, and should enter the main ducts at an angle of 30 deg. or less.

In addition to the defects of right-angled bends, &c., it is found that, in the hot atmosphere of a pottery, wooden ducts warp and crack, thus air is admitted along the duct which should be pulled through the openings of the hoods. With regard to the size of the ducts, the cross section of the main channel should be as large as, or slightly larger than, the inlet of the fan, and the sum of the cross sections of all the branches should be equal to that of the main duct. Equality of draught at the bench openings may be obtained roughly by relatively enlarging the openings farthest from the fan; or more accurately, and with better results, by tapering the main duct away from the fan, keeping the cross section at any point equal to the sum of the cross sections of the branches lying on the side remote from the fan. An excellent device for overcoming this difficulty has been patented, and its merits should be considered by anyone seeking the best in this direction. The failure of propeller fans to exhaust through lengthy ducts of bad design may be vividly seen by holding a light ribbon near the delivery side of the fan. It will be found that air is being delivered by the outer extremities, or tips of the blades, while air is rushing inwards at the centre of the fan. The power necessary to drive the fan is being used in churning the air in at the centre and out at the tips of the fan blades.

In conclusion, let me say that the success or failure of any system of ventilation depends so much on local conditions that it is always advisable to call in an expert from a good firm of ventilating engineers before any extensive alterations are put in hand. Even with the best advice the result is sometimes failure, and to meet this difficulty, I would recommend a clause in the contract that the installation should be such as will satisfy the factory inspector under the conditions required by the new Regulations.

* Wooden ducts may still be necessary in fired-flint sifting, &c., where there might be a risk of iron contamination from metallic piping.

THE ARTS AND CRAFTS EXHIBITIONS.

(BY OUR OWN REPRESENTATIVE.)

THE principal factors in the artistic development of our manufacturing industries have been the praiseworthy efforts of a few enthusiasts to unite intelligent design with skilful handicraft. Two organisations, both with this objective in view, but aiming at it from very different planes, have held exhibitions in London during the past month—"The London County Council Central School of Arts and Crafts" and "The Arts and Crafts Exhibition Society." The latter is the older and more ambitious movement, but they are equally worthy of encouragement. I have visited both exhibitions, and propose, first, to give briefly some particulars of that in connection with

The County Council School of Arts and Crafts.

This school was first opened in temporary premises in Regent-street, seventeen years ago, and was established by the London County Council to provide instruction in those branches of design and manipulation which bear on the more artistic trades. The Exhibition this year was held in the school erected by the Council in Southampton-row about five years ago. Thorough training in the Arts and Crafts is provided, but admission to the course of instruction in various handicraft subjects is, within certain limits, extended only to those actually engaged in handicraft. Every opportunity is given to students to specialise in their own particular calling. The school is intended to supplement rather than supersede apprenticeship by affording students engaged in art industries fuller opportunities for design and practice in various branches of their craft than can usually be obtained in the ordinary routine of a workshop. Instruction is given in architecture and building, silversmiths' work and allied crafts, book production, cabinet work and furniture, drawing, design and modelling, stained glass work, mosaic, and decorative painting. Practical trade classes are intended to supplement workshop practice and not to teach trades. Students in these classes are expected to attend lectures and drawing office work in connection therewith, and those who fail to do so will not be allowed to continue the workshop practice. An exhibition of the work of the students is arranged at the beginning of each school year, and all work done in the school must be available for exhibition if required.

Amongst the classes pertaining to the pottery and glass industries, there are those for instruction in modelling. The work is adapted to the individual needs of each student, and includes simple modelling of floral forms to fill given spaces, analysis and modelling of plants from nature with a view to design, copying good historical examples and adapting designs from the same. There are also classes for painting on china, the instruction in which includes painting in underglaze, hardening, painting in overglaze or enamel colours, tiles, majolica. The attention of designers wishing to get in touch with a craft is directed to facilities afforded to turn their designs to practical account.

In the school for stained glass, mosaic, and decorative painting, instruction is given in general composition and setting-out of windows, cutting, and the use of the lead line in plain glazing, ornament and figure work, design, sketching to scale in glass, the preparation of studies and cartoons, the tracing and painting of stained glass from cartoons, and the various treatments of the glass in painting.

The Exhibition just held is very interesting, but it cannot be described as satisfying—indeed, as far as I was concerned, it was disappointing. It consisted of architectural and museum studies by students in the Schools of Art maintained by the London County Council, and for which prizes have been given in the various annual exhibitions from 1900 to 1912. The utility of the instruetion given would have been shown if examples of the work executed by students before the specimens for which they were awarded prizes had been exhibited along with their successful efforts. The only method of ascertaining the extent to which students have profited by the instruetion given them, that is by comparison, was not available. The exhibits are interesting, and though they are not indicative of the progress of the executants, many of them are worthy of notice. Miss Maud Mary Evans well deserves the prizes awarded her. Among other prize winners Mr. Vincent Freudmacher, of the Camberwell School of Art, was rewarded for a plate of red earthenware, glazed; Miss Irma C. Alexander, of Camden School of Art, was successful with a glazed earthenware tile. Miss Gertrude Sabey, of the Central School of Arts and Crafts, was rewarded for her drawings of Roman glass vases, and of glass bottles of the Roman period; and Miss Dora Bard received a £10 prize for drawings of rock crystal, mounted in silver.

The Arts and Crafts Exhibition Society.

The tenth exhibition of this Society has just been held at the Grosvenor Gallery, New Bond-street. These exhibitions have been triennial with one or two exceptions. The last one was held in 1910 at the famous New Gallery, Regent-street, which has since been converted into a restaurant. The Society was formed to afford an opportunity for personal artistic distinction in design and handicraft, and to maintain a high standard in both, and thus (to paraphrase Dr. Birkbeck, the founder of the Mechanics' Institution) to "make the artist a better craftsman, and the craftsman a better artist." This object is especially interesting to workers in pottery and glass in which it is of the first importance to bear in mind the true relationship that should always exist between design and ornament. The effects of the better appreciation of this affinity since the formation of technical schools and art classes are now manifest in all our great manufacturing industries. Mr. Walter Crane, the eminent painter, decorator, designer, writer, and lecturer, and the President of the Society, has said that "Artistic production in all branches of decorative art has enormously increased since William Morris and his group went forth as pioneers." Mr. Crane himself, the late Mr. Lewis F. Day, Mr. William Burton, Mr. J. S. Williams-Thomas, and others, have for years been emphasising the close affinity between ornament and design, and through their labours in encouraging art classes and technical schools in all manufactures (and in the pottery and glass trades especially), domestic articles in every day use are more beautiful in form and decoration than ever they were. This year's Exhibition of the Arts and Crafts Society is evidence of this. There are 550 exhibits including embroideries, jewellery, enamels, wood engraving, binding for books, carved ivory, drawing, furniture, wall paper and ironwork. There are also many beautiful specimens of ceramics and glass ware, and it is pleasing to note that our industries furnish perhaps the very best example of artistic craftsmanship in this Gallery. "Credit to whom credit is due." We are pleased to see that the Society gives in each case the names of the artificers in addition to the names of the manufacturer. It is not right that the creators of artistic models and designs applicable to manufactures should be practically ignored and the names of the manufacturers alone associated with the production.

The Arts and Crafts Society are giving rising artists

and craftsmen the opportunity of publicly exhibiting their work under their own name in conjunction with the name of their employer—the manufacturer. Most of the best firms in our industries are proud of the work of their artists, and are always willing to give them credit for their skill. Exhibitions like the present one give them the opportunity of doing this publicly.

Taking the Exhibition as a whole, it shows us that designers are fully alive to the fact that the public want their lives and their homes made beautiful. There is no reason why they should not be so. It is natural that they should be. All industries contribute to this end ; but the manufacture of pottery and glass especially so. The specimens of cabinet work, printing, and book-binding are all deserving of favourable comment, but I must limit these notes to a few observations on the examples of pottery and glass. To my mind (but perhaps I am prejudiced) they are the most artistic of all the exhibits. First impressions are often the most lasting, and the beautiful exhibits in the entrance corridor filled me with admiration. The case of pottery by Alfred H. Powell and Louise Powell is a typical collection of modern artistic ware. A covered bowl on foot in colours and lustre, a round dish with portraits, three octagonal china bowls, are all refined productions They are supplemented by a number of dainty china napkin rings, teapots, facetted vases, jardinieres, cups and saucers, and covered pots, painted by A. H. Powell and Louise Powell, and executed and exhibited by Josiah Wedgwood & Sons, Ltd. Case No. 501 contains a fine collection of Lancastrian Lustre Ware, executed by Pilkington's Tile and Pottery Co., Ltd., Clifton Junction. There are vases and stands, covered jars, dishes, bowls with the beautiful lustrous glazes and unique and almost indescribable ethereal effects which are the prominent feature in Lancastrian pottery. The wonderful glazes and lustres produced by Messrs. William and Joseph Burton have frequently been commented upon in THE POTTERY GAZETTE, and are seen to advantage in this collection. The designers and painters of the present exhibits are Walter Crane, C. E. Cundall, Richard Joyce, Annie Burton, Gwladys M. Rodgers, Gordon M. Forsyth, and W. S. Mycock. Each piece bears the monogram of the artist, but, without that, the artists are already famous, and their work bears the impress of their originality. In the corridor there is a case of pottery, which includes a china plate painted by Gabriel C. Bunney, and made by Josiah Wedgwood & Sons. A six-handled jug in brown stoneware executed by Doulton & Co., and painted by Harry Simeon, and several examples of china painted by M. Hindshaw and others produced under her direction. Mr. Pascoe H. Tunnicliff is responsible for an interesting collection of art ware, including vases, trinket boxes, caddies, pot pourri, &c., executed by Annie Buck, J. W. Dawes, and Maurice Hall, and exhibited by the Ashby Potters' Guild. There is a case of artistic pottery by Mr. W. Howson Taylor, including examples of the refined work for which he is now famous. There are many other specimens of high-class ceramics, but space will not allow me to mention them in detail.

On the landing there is a case of blown glass of exceptional beauty, which is entitled to a more lengthy description than I can give it now. Mr. Harry J. Powell has designed a covered chalice of beautifully delicate texture —the finest example of artistic glass in the Exhibition. In addition to an interesting collection of wine glasses, lotus vases, crimson fern vases, &c., Mr. Powell has produced a soda-lime champagne glass with gold knob and ornament scratched with diamond and steel points. Similar scratched decoration was used by Verzellini at the Crutched Friars Glass Works in the sixteenth century. This and many other specimens of artistic blown glass ware was exhibited by James Powell & Sons, Whitefriars Glass Works. The works exhibited are for sale, and in addition to the name of the artist, the price is attached to each.

ROYAL WARRANT HOLDERS.

(SPECIALLY CONTRIBUTED.)

THE authorities at Buckingham Palace have issued Lists of Royal Warrant Holders for 1913. The names include the following :—

LIST OF THE LORD CHAMBERLAIN TO THE QUEEN.—Thomas Goode & Co., purveyors of china and glass, London.

LIST OF THE LORD STEWARD.—J. W. Baker, glass and china, Aberdeen ; Coalport China Co. (John Rose & Co.), Ltd., china, Coalport ; W. T. Copeland & Sons, china, Stoke-on-Trent ; A. B. Daniell & Sons, glass, London ; John Donald & Co., glass and china, Edinburgh ; J. Ford & Co., glass and china, Edinburgh ; Thomas Goode & Co., glass and china, London ; Mortlock's, Ltd., glass and china, London ; F. & C. Osler, Ltd., table glass, London ; Phillip's, Ltd., china and glass, London ; Pulham & Son, rockworkers and makers of terra cotta, London ; Roberts & Co., glass and china, Windsor ; Richard Sankey & Son, Ltd., horticultural pottery, Nottingham ; Daniel St. John Sheehan, china and glass, Cork ; Whyte & Sons, Ltd., china and glass, Dublin.

LIST OF THE LORD CHAMBERLAIN.—Clayton & Bell, glass painters, London ; George Cooper & Son, glaziers, &c., Windsor ; Doulton & Co., Ltd., potters, London ; Alfred Goslett & Co., Ltd., suppliers of plate glass, London ; Minton, Hollins & Co., manufacturers of encaustic tiles, Stoke-upon-Trent ; Mintons, Ltd., manufacturers of earthenware and china, Stoke-upon-Trent ; Apsley, Pellatt & Co., glass and china manufacturers, London ; Royal Crown Derby Porcelain Co., Ltd., manufacturers of porcelain, Derby ; Worcester Royal Porcelain Co., Ltd., Worcester porcelain manufacturers, Worcester.

LIST OF THE LORD CHAMBERLAIN TO H.M. QUEEN ALEXANDRA.—Bing & Grondahl, porcelain manufacturers, Copenhagen ; F. Rathbone, dealer in Wedgwood and old English pottery, London ; Royal Copenhagen Porcelain Manufacturing Co., porcelain manufacturers, London.

LIST OF THE COMPTROLLER TO H.M. QUEEN ALEXANDRA.—Thomas Goode & Co., china and glass merchants, London ; Mortlock's, Ltd., china and glass merchants, London ; Phillip's, Ltd., china and glass merchants, London ; Richard Sankey & Son, Ltd., manufacturers of horticultural pottery, Nottingham.

The following have authority to style themselves "By Appointment to the late King Edward VII." :—

LIST OF THE LORD STEWARD.—Gibson & Howorth, china and glass, Preston ; Ludwig, Moser & Sons, glass manufacturers, Karlsbad.

LIST OF THE LORD CHAMBERLAIN.—Heaton, Butler & Bayne, artists in stained glass, London ; G. H. Rowe, glazier, &c., London.

The following are authorised to style themselves "By Appointment to the late Queen Victoria" :—

LIST OF THE LORD STEWARD.—James Green & Nephew, china and glass, London ; James Richard Whitman, china and glass, Cowes, Isle of Wight.

Metallic Oxides for glazing ceramic wares are now dutiable at 10 centavos per kilo. gross, on importation into Ecuador (100 centavos = 2s.). They were formerly free of duty.

PROPOSED NEW REGULATIONS FOR POTTERIES.

THE following is the Report of his Honour Judge Ruegg, K.C., on the Draft Regulations for the Manufacture and Decoration of Pottery and any Process Incidental thereto, made in pursuance of Section 79 of the Factory and Workshop Act, 1901, and presented to both Houses of Parliament by command of His Majesty :—

Uttoxeter, Dec. 31, 1912.

SIR,—In pursuance of my appointment dated Nov. 2, 1912, directing me to hold a Public Inquiry under Section 81 of the Factory and Workshop Act, 1901, with reference to the objections raised by employers and workers to the draft Regulations for the Manufacture and Decoration of Pottery or any Process Incidental thereto, I have the honour to report as follows :—

I held the Inquiry at Stoke-on-Trent on Nov. 25 and the two following days.

The following Counsel and persons interested appeared before me and took part in the proceedings :—Mr. James Hunter Gray and Mr. Harold McKenna, Counsel, represented the Home Office ; Mr. A. B. Whitfield, Counsel, represented the Joint Committee of Pottery Manufacturers ; Mr. Joseph Lovatt appeared for the National Amalgamated Pottery Workers' Society ; Mr. W. Callear for the Ovenmen's and Dippers' Union ; Mr. J. Johnston Green for the Terra Cotta Association ; Mr. H. R. Bird for the Potters' Federation, Ltd., Glasgow ; Mr. H. H. Bailey for the United Earthenware Manufacturers, Ltd. ; Mr. W. Hassall for C. W. Outram & Co., Woodville ; Mr. T. W. Lack for the Barker Pottery Co., Chesterfield ; and Mr. Charles Black for the Oldfields and London Potteries, and Brampton Brick Works, Chesterfield.

I also read and carefully considered the whole of the written objections made to the draft Regulations by or on behalf of persons interested and who were not present or represented at the arbitration.

My Inquiry was greatly facilitated and shortened by the conciliatory and generous spirit in which the proposed Regulations were received by the employers generally. Mr. William Burton, Chairman of the Joint Committee of Manufacturers, and Mr. J. C. Bailey, director of Messrs. Doulton & Co., and others, were in frequent friendly conference with the officials of the Home Office, both before and during the course of the holding of the Inquiry, with the result that a large number of the written objections were disposed of by agreement, and some verbal amendments made, with the object principally of removing doubt as to their meaning, though the Regulations were not materially departed from. I consider both the Home Office and the Pottery Trade generally are greatly indebted to these gentlemen for the interest they have shown, and for the ability and judicial spirit in which they approached, dealt with, and solved matters at one time in controversy.

One of the chief objections raised by the employers was to Regulation No. 27 in the proposed draft Regulations, which relates to the observance of the Regulations in the works. This rule, as originally drawn, required the person or persons appointed to see to the observance of the Regulations, to record weekly prescribed details in regard to prescribed questions concerning the observance of the Regulations, and required copies of the prescribed questions and weekly entries to be posted up in the factory and messrooms.

The objection of the employers to assent to this rule before knowing what the "prescribed details" and "prescribed questions" would contain, appeared to me to be reasonable.

The parties asked permission to defer the further consideration of this rule in order to endeavour in conference to agree upon a new rule which might satisfy the objection and be equally efficient to secure the object aimed at. Subsequently, by agreement of all parties, a new rule was formulated and substituted for the former one. In my opinion the new Regulation (No. 27) effects substantially the object aimed at by the former one.

STONE AND SALT GLAZED WARE.

Mr. Lack, for the Barker Pottery Co., Chesterfield, and Mr. Bird, for the Scottish Stone Ware Potteries, contended that stone ware potteries should be relieved from the whole of the proposed Regulations and be placed under Exemption No. 4, on the ground that there was no real difference between stone ware and salt glazed coarse ware, except the glaze, and that as the glaze was harmless complete exemption should be granted to them.

The question of the position of stone ware factories was carefully considered by the Departmental Committee appointed to consider the whole subject, who, after visiting some of these factories, came to the conclusion that the work there carried on is at least as dusty as that in the potters' shops of ordinary earthenware and china works (p. 7 of Report) ; and who accordingly recommended that "the proposals which they have made with regard to all processes other than those in which glazes or dipped ware are handled shall also be enforced in coarse ware and stone ware factories, in respect of all processes carried on therein which are similar in character and involve like risks" (p. 123 of Report).

The claim for total exemption of stone ware factories was largely based on the argument that the processes of manufacture were the same as those employed in the making of salt glazed coarse ware (except as to glaze, which in both cases is harmless), but Mr. Werner, one of His Majesty's Inspectors of Factories, pointed out that they are not the same in degree ; that the works in which salt glazed coarse ware and no other pottery is made are generally smaller than the stone ware factories, the rapid drying in stone ware factories causes a lot of clay dust and the clay is not always the same. He further satisfied me that there are quite a number of small places where salt glazed ware only is made, in which there is no great danger of dust and no great danger of persons carrying heavy weights, whilst in stone ware potteries the conditions as regards dust, the necessity for sweeping the floors, the question of carrying heavy weights, and such like matters, were at least "as bad as you would find in the average pottery in Staffordshire."

Stone ware factories are included in the definition of coarse ware factories, and in cases where no other pottery is made are at present exempted under Exemption 3 from a great number of the proposed Regulations.

Having regard to the dangers which may exist in these factories, especially the danger arising from dust, I am not able to recommend that any other or further exemptions should be granted to them.

TEMPERATURE OF OVENS WHEN DRAWN.

An objection was raised and strongly urged upon me, on behalf of the Ovenmen's Union by Mr. Callear, to the proposed Regulation 10 (d), which relates to the maximum temperature at which ovens may be drawn. This temperature is fixed by the rule at 125 deg. Fahr., and I was strongly pressed to recommend that the maximum temperature should be reduced, if possible, to 100 deg. Fahr. Considerable evidence was given before me by medical men and others that the operation of drawing ovens is very onerous work, and that to carry it on in a temperature of 125 deg., or even 100 deg., is exhausting and unhealthy. My sympathy inclined strongly towards those who urged

this reduction upon me, for I believe that such heavy work carried on in so high a temperature is most distressing and eventually injurious to the workers.

As the ovens are at present constructed, and having regard to the system on which the work is carried on in the Potteries, I find myself unable to recommend that any present alteration should be made in the maximum temperature proposed to be established by Regulation 10 (d). Though I regret the conclusion which I feel compelled to arrive at, I am satisfied that the proposed Regulation as it stands will be a great advance on the system hitherto existing. I am satisfied that many ovens were drawn in the past when the temperature of the oven far exceeded 125 deg., though from the fact that temperature was not formerly taken it is impossible to discover with accuracy what such temperatures were.

The maximum of 125 deg. Fahr. was a recommendation of the Departmental Committee, and was arrived at by a reference by this Committee to a sub-committee consisting of two of its own members, viz., Mr. Bernard Moore, representing the employers, and the late Alderman Edwards, who at this time was the secretary of, and representing, the Ovenmen's Union; so that the temperature proposed in the Regulations may be said to have been arrived at by agreement between the employers and the ovenmen. I am not, however, so strongly influenced by this consideration as by the evidence given before me pointing to the inconvenience and loss to the trade if a reduction in maximum temperature, say to 100 deg., was at once insisted upon.

The whole of the output of each pottery passes through the ovens, and consequently any delay in setting or refilling the ovens reduces the output of the pottery, and necessarily reduces the labour employed.

It was asserted by Mr. Bernard Moore, the well-known expert in the pottery trade, and Mr. Burton, the chairman of the Employers' Association, and agreed to by Mr. Benson, who was called on behalf of the Ovenmen's Union, that a reduction of temperature for drawing from 125 deg to 100 deg. would mean leaving the oven untouched for from 12 to 24 hours longer than it is at present left. It is not usual to allow the ovens to lie fallow for any time. As soon as one is drawn the operation of resetting it commences. To wait a further time of from 12 to 24 hours in every case would, in the opinion of several competent authorities who gave evidence before me, be, from an economic standpoint, most disastrous to the industry in the potteries, and in fact all over England.

Although I am not able to recommend that the draft Regulation 10 (d) should be altered, I wish—if I am not straying beyond my province in so doing—to suggest that Factory Inspectors should be instructed to urge upon all employers in the industry the utility and importance of providing all the ovens with cooling dampers, back clammings, or other devices for hastening the operation of cooling.

According to the evidence of Mr. Bernard Moore, cooling dampers already exist in a majority of ovens in the Potteries, but a very small proportion, somewhere from 5 to 10 per cent. have back clammings. To adopt back clammings involves only small expense, and they could be used in very many though not all of the existing ovens. I am satisfied that if brought prominently to the notice of the employers by the Factory Inspectors they could and would be more generally adopted, and that they would have a salutary effect.

No other objections to the Regulations were prominently brought before me, and I see nothing in the written objections of persons who did not appear at the arbitration which would justify me in recommending any alteration of the proposed Regulations; especially having regard to the fact that every regulation was most carefully considered with regard to the interest of both the employers and workers, and evidence taken thereon by the Departmental Committee who formulated the recommendations upon which the draft Regulations have been framed.

Attached to this report is a draft of the Regulations in the form in which the author suggests they should be promulgated.

[We have received the Statutory Rules and Orders issued by the Home Office for the Regulation of Factories and Workshops, in which dangerous and unhealthy occupations are carried on. These Rules embody all the suggestions made by his Honour without any modification.—Eds. P.G.]

Reviews.

Lead Poisoning and Lead Absorption. By Thomas M. Legge, M.D., and Kenneth W. Goadby, M.R.C.S. London: Edward Arnold. New York: Longmans, Green & Co. 12s. 6d. net.

With the single exception of the danger incidental to the presence of coal dust in mining operations, there is, perhaps, no question that affects industrial workers so injuriously as the use of lead. Colliery owners and manufacturers and their responsible managers have long recognised the danger of coal dust, and successive Governments have been vigilant in their efforts to minimise it—by drastic legislation, by suggestive methods, and by systems of strict inspection. It appears to be admitted that it is practically impossible absolutely to eliminate all danger from these two insidious causes. Well-meaning but narrow-minded enthusiasts say that since coal cannot be mined, and since certain manufacturing processes cannot be carried on without danger to human life, they should be prohibited entirely—"which," as Euclid would have said, "is absurd." Broad-minded people take the more rational course of constantly suggesting means for reducing danger that, humanly speaking, it is impossible to avoid. That serious attention is perpetually given to secure protection to workers is evidenced by the literature bearing upon it, published by practical and scientific experts. The present volume is one of a series of International Medical Monographs on subjects of immediate interest, contributed by first-hand authorities who have long been engaged in extending our knowledge on those subjects. These monographs furnish accurate information on the rapid progress made in new phases of investigation by leading authorities in America and Europe, and the volume under consideration on "Lead Poisoning and Lead Absorption" is the joint work of Thomas Legge, M.D., H.M. Inspector of Factories, and Kenneth W. Goadby, M.R.C.S., pathologist and lecturer on bacteriology. It deals with a subject of wide interest, since lead is associated with so many important processes of manufacture—"the making of white lead, pottery glazing, glass polishing, handling of printing type, litho' making, house, coach, and motor painting; the manufacture of paints and colours, file making, the tinning of metals, harness-making, and other manufactures." The authors adduce evidence (experimental and statistical) of the causation of lead poisoning by the inhalation of dust. This makes prevention a simple matter, and they suggest methods of prevention which will contribute greatly to the health of the workers in the prevention of phthisis, which is so prevalent amongst lead workers. The measures mentioned are those enjoined by regulations and special rules applying to various industries, under powers conferred by the Factory and Workshops Act,

1901. Where, however, particular processes are not amenable to the measures ordinarily applied, other lines are suggested on which the dangers may be met. They judiciously refrain from reprinting the official regulations and special rules, assuming that those who consult this book will have access to them in the various works published on the Factory Acts. The book is interesting as a history of the use of lead for various industrial purposes and for painting, from the time of the ancients ; while it is of great value as a work of reference on the effects of modern uses of lead. There are chapters dealing with the chemistry of lead, susceptibility to and immunity from, the dangerous influences of it, chemical investigations in the determination of cases of lead poisoning. There are three chapters descriptive of processes in which lead is used, and three chapters dealing with preventive measures against lead poisoning The book is well printed and strongly bound in red cloth and gilt, and has a very complete index.

Ceramic Chemistry. By H. H. Stephenson. Published by Davis Bros., 265, Strand, W.C. ix—91 pp. Price 6s.

Those who know Mr. Stephenson's ability and industry cannotfail to be disappointed with the volume just published by him "to promote the secondary and higher study of ceramics in England." The impression the book produces at the first reading is that it comprises the rough notes made by a ceramic chemist for his own use, arranged in fifteen groups, and with but little attempt to secure a logical or even convenient sequence of facts. The author quotes extensively from existing English and American books on the subject, often without acknowledgment or any other indication that he is quoting, and it is doubtful whether there is a single piece of information of importance which is not found in one or more of the books published on ceramics during the past five years in this country. If Mr. Stephenson had arranged his facts in a suitable manner, and had made his book contain about four times as much as at present, he would have rendered a useful service to students of ceramic chemistry, as this subject has not yet been adequately treated within the compass of a single volume, to the exclusion of other matters. The value of such a volume depends entirely on (*a*) its adequate treatment of the subject ; (*b*) its systematic arrangement of the facts and theories mentioned ; and (*c*) its rigorous exclusion of other subjects. In each of these respects the work now under review fails miserably, and consequently this book is more closely related to a series of clippings or abstracts from various technical works and "transactions" than a definite contribution to so important a subject as that covered by its title and preface. Indeed, the present reviewer looked forward with pleasurable anticipation as soon as he had read the title page, but after carefully reading the book through twice, he cannot help feeling how lamentably a great opportunity has been missed—an omission the more regretable as Mr. Stephenson has apparently both the knowledge and the ability necessary for making the most of the subject. The first chapter, entitled "Geological Origins," deals with the minerals associated with clays in a painfully superficial manner, and, like the remaining chapters, contains several statements which are misleading and at the first glance appear to be quite erroneous. This is, in part due to the clumsiness of the author's style and to faults in the grammatical construction of a large number of sentences, but this does not explain all the errors. From the very commencement, the author uses highly technical terms, and some purely local ones, without any explanation of their meaning. Hence his work would be quite unintelligible to the ordinary student of chemistry and the other sciences mentioned in the preface. This difficulty is increased by a number of printer's errors, such as "slop" for "slip," "tarred" for 'tared," &c., and by several contradictory statements due to careless proof-reading. Chapter II. is devoted to "clay," and comprises about as many words as a single page in The Pottery Gazette ! Ball and fire clays are taken together, and occupy only seventeen lines ! Even china clay is erroneously described as a "non-plastic substance"! Schloesing is stated to have "actually isolated the colloids from clay"! and the whole chapter is more like an elementary schoolboy's essay than the work of a pottery chemist. The latter chapters are equally unsatisfactory, with the exception of the ones on enamels and colour, and even these are very incomplete. There is a "Bibliography in English," which only includes fourteen items, and no indication is given as to the publishers, though eight references are to American works, several of which are not listed in the ordinary publishers' catalogues. Fortunately, some of the books referred to contain fairly complete bibliographies, but the reader who refers to these volumes will wonder why Mr. Stephenson has taken the trouble to publish the book under review. The bibliography is stated to comprise the chief books and journals, but none of the journals devoted to ceramics in this country and the United States are mentioned ! We can recommend every student of ceramics who has any thought of writing a book on the subject to purchase this volume as one of the best examples of what to avoid which it has ever been our privilege to read.

Transactions of the American Ceramic Society. Vol. XIV. Edited by Homer F. Staley. Published for the Society by E. Orton, jun., Secretary, Columbus, Ohio. 1912.

This is a bulky paper-covered volume containing the papers read at the meeting held at Chicago, Ill., March 4, 5, and 6, 1912, together with supplementary discussions and other matter. The contents are preceded by lists of Officers of the Society for the year 1912-1913, Membership of the Society, Rules of the Society, Publications, The Annual Report of the Board of Trustees, Report of the Treasurer, and obituary notices of E. H. Taylor, S. V. Peppel, and M. Ogan. Among the papers, many of which are illustrated, are : Address of Retiring President ; the American Ceramic Society, by Charles Weelans ; Influences of Variable Silica and Alumina on Porcelain Glazes of Constant RO, by R. T. Stull ; The Plasticity of Clay, by F. F. Grout and Frederick Poppe ; Result of Tests on Some Bricks from the Provinces of Western Canada, by Heinrich Ries ; Some Data on the Deformation Points of Feldspar-Quartz, Feldspar-Mica, and Feldspar-Beryl Mixtures, by A. S. Watts ; A Study of Glaze Composition on the Basis of "Norms," by Ross C. Purdy ; Downdraft Kiln Bottoms, by T. W. Garve ; Colours Produced by Nickel Oxide in Ceramic Mixtures Containing Zinc, by Forrest K. Pence ; Drying Defects in Some Cretaceous Clays of the Great Plains Region of Canada, by Joseph Keele ; The Manufacture of Promenade Tile, by George W. Shoemaker ; The Influence of the Composition of the Stain in the Production of Red from Chrome-Tin Pink Stains, by Ross C. Purdy ; a Thermal Study of Boric Acid-Silica Mixtures, by A. V. Bleininger and Paul Teetor ; The Behaviour of Granular Limestone in Burned Clay, by Charles F. Binns and Merle A. Coates ; the Production of Black Spots upon Terra Cotta Glazes, by Cullen W. Parmelee and Ralph Heidingsfeld ; The Clays and Clay Industries of Argentina, by Jaun Hoursouripé ; a Glaze Imitation of Granite, by Ralph Heidingsfeld ; The Relations between Manufacture and Properties of Refractory Clay Wares, by W. Stout ; Production of

Vitrified Black and Chocolate Floor Tile, by Ross C. Purdy; High Voltage Insulators and High Potential Testing, by E. T. Montgomery; The Effect of Temperature on the Dielectric Strength of Porcelains, by George Weimer and C. T. Dun; The Relation between the Crushing Strength and Porosities of Clay Products, by G. H. Brown; Studies of Flint Clays and their Associates, by Sydney L. Galpin; Some Possible Definite Relations between Composition and Properties of Clays, by F. F. Grout and H. H. Brown; Examples Showing the Uselessness of Rational Analysis of Clays as a Means of Controlling Glaze Fit, by Ross C. Purdy; Note on the Fuel Consumption of some Whiteware Kilns, by Thos. Gray; Note on the Specific Heat of Clay, by J. M. Knote; Settling and Filtering of Fire Clays, by George E. Thomas; Bodies for Inverted Mantle Rings, by R. Linn Clare; Light Green Chromium Stains, by A. R. Heubach; Kaolin Mining in the South Appalachian Mountains, by A. S. Watts; An Apparatus for the Determination of the Expansion Co-efficient of Solid Bodies, by P. A. Boeek; Recent Developments in the Refractories Industry, by F. T. Havard; Oils, Fats, and Greases for Die Greasing in the Manufacture of Dust-Pressed Ware, by Geo. Simcoe and A. F. Smith; The Testing of Paper Clays, by Charles S. Gwinn; Investigations on the Dielectric Strength of Some Porcelains, by B. S. Radcliffe; The Working of some Montana Clays, by Richard R. Hice; Design of an Economic Furnace for Tunnel Drying, by S. C. Karzen; A Note on the Accidental Pink Discoloration of a White Enamel for Terra Cotta, by Duane F. Albery; Some Chemical Reactions of Interest to the Plate Glass Chemist, by F. Gelstharp; Behaviour of an Acid Glass in a Tank Furnace, by J. M. Knote; Solubility of Some Salts in Glass, by F. Gelstharp; Matte Glazes, by Ross C. Purdy; A Theory for the Cause of Matteness in Glazes, by Forrest K. Pence; The Microscopic Examination of Twelve Matte Glazes, by Homer F. Staley; the Dehydration of Clays, by G. H. Brown and E. T. Montgomery; Philippine Pottery, by C. H. Crowe; The Chemical Rôle of Boron in Glazes, by Ross C. Purdy; Cobalt Colours other than Blue, by R. T. Stull and G. H. Brown; Notes on the Performance of a Producer Gas-Fired Continuous Kiln, by W. D. Richardson; Oil as a Fuel in Burning Ceramic Wares, by Joseph K. Moore; Note on the Relation between Preheating Temperature and Volume Shrinkage, by R. K. Hursh; the Nomenclature of Clays, by Charles F. Binns; Observations on the Effect of Pressure on the Vitrification of Clay, by Lemon Parker; The Effect of Acids and Alkalies upon Clay in the Plastic State, by A. V. Bleininger and C. E. Fulton; Note on Terra Cotta Glazes, by Cullen W. Parmelee and Ralph Heidingsfeld; The Melting Points of Pyrometric Cones under Various Conditions, by Samuel Geijsbeek. We hope to reproduce a selection of these papers in our columns as space permits.

Bristol Porcelain.—The demand for this rare china continues good, and prices are increasing. At Puttick & Simpson's sale-room, Leicester-square, London, a tea cup and saucer, painted with the monogram S.S. in flowers, with laurel festoons and gold border, part of the celebrated Burke Smith service, was sold for 38 guineas, and another cup and saucer, with monogram R.S. in flowers, laurel festoons and gilt borders, with cameo heads in medallions, fetched 40 guineas; both these had the cross mark in blue. A pair of plates painted with sprays and festoons of flowers realised 28 guineas, and another pair of plates, 9 in. in diameter, went for 32 guineas. Bristol porcelain is evidently worth keeping.



THE ENGLISH CHINA MANUFACTURERS' ASSOCIATION.

(BY OUR OWN REPORTER.)

A COMPLIMENTARY dinner to the President of the English China Manufacturers' Association, Mr. F. H. Heath, took place at the Crown and Anchor Hotel, Longton, on Jan. 8. Mr. Heath was thus honoured in recognition of three years' valued and able service in that office. The gathering was presided over by Mr. H. J. Colclough, who was supported on the one hand by the guest of the evening and on the other by the Mayor of Stoke-on-Trent, Alderman F. Geen.

The Chairman, in proposing the health of the President, said Longton was not the birthplace of Mr. Heath, but he came there 24 years ago and rapidly made his way. He possessed a character which endeared him to all who knew him, and he had an urbane, gentlemanly, and kind disposition which appealed to everyone. After speaking of the President's work as a member of the Stoke-on-Trent Council, Mr. Colclough went on to refer to his services in connection with the china trade. Mr. Heath had had serious responsibilities as President, for they had passed through troublous times in regard to the special rules and negotiations with the operatives. In regard to the latter their President had been a peacemaker, and had largely assisted to bridge over their difficulties.

The toast having been received with much enthusiasm, Mr. Heath replied. When he was told three years ago the Association desired him to become their President, he was informed that a quiet, uneventful time was before them, but they had hardly got settled down before they received the first draft of the special rules. He should never forget the consternation expressed when manufacturers first saw them. Many level-headed men of business said, "Don't consider them at all; tell the Home Office we will close down factories until they are withdrawn." In their cooler moments, however, they realised it was of no use kicking against the pricks. Their special committee and the joint committee of the two Associations set to work; suggestions were made to the Home Office, and something was done to modify the rules. He believed they had the sympathy of the Home Office, who understood the trade, but it was only official sympathy, and that was somewhat cool. There were, however, people outside the Home Office who had the ear of the Home Office, and were on the Lead Commission, who had no sympathy with or knowledge of the trade. These people wanted to impose on them conditions which would have been a disgrace, and would have made it impossible for them to carry on business and hold up their heads as honest Englishmen.

He proceeded to pay a tribute to the work of the Manufacturers' Joint Committee, and in particular to two members of that committee who were also on the Home Office Committee—Messrs. Bernard Moore and W. Burton. Impossible conditions would have been pressed on the trade but for those two gentlemen, for the fact that they were two of the foremost men amongst the scientific potters of the day compelled attention to their opinions and suggestions. Now the rules were to be put into operation. They still considered many of them were unreasonable, many vexatious and many difficult to carry out, but he thought that when the rules became law manufacturers should try to carry them out in the spirit as well as in the letter, and see if they could not remove a stigma which seemed to attach to them, but which they did not deserve. Of course the expense would be great, and would fall heavily on manufacturers who were occupiers of small, old factories. The Home Office had never

seemed to consider these at all. He would throw out a suggestion which had once been made in jest; let the Government grant them long-dated loans at a low rate of interest, repayment only to be guaranteed on their profits. On the subject of labour unrest, he observed that they had satisfactorily settled on honourable terms for the next eighteen months. Proceeding, Mr. Heath said the old Association was formed to regulate selling prices; the present Association originally decided not to trouble about selling prices, but the time came when they were forced to tackle the question. In that respect they had done good work. They had been in an anomalous position in the china trade for the past few years, for while they had had plenty of trade, they had seen their profits diminishing almost to vanishing point. The meeting of the Association held the previous week (referred to in our Notes from the Potteries) showed how everybody recognised the gravity of the situation, and he appealed to all of them to support the Association's decision undividedly.

"The Mayor and Corporation" was submitted by Mr. Thomas Poole, and acknowledged by the Mayor, Alderman F. T. H. Goodwin and Mr. T. H. Griffiths.

The toast of "The China Trade" was proposed by the Mayor in a speech of considerable importance. Having touched on the history of the local industry, he said when they recollected that there were over 50 manufacturers of china in Longton, that the value of their productions was three-quarters of a million per annum, and that the wage bill was something like £375,000, they would realise the importance of the trade to the district, to the country, and to oversea dominions. They were employing in china manufacture something like 10,000 people, which further emphasised the industry's importance. In the past the Association had kept out of its deliberations the question of selling prices. He did not think that ought to have been the case, for it devolved on the fifty firms engaged in the production of china to see that their selling prices were such as would yield a reasonable profit to themselves, a living wage to their workpeople, and allow them to produce an excellent article. The profits of china manufacturers were not large, although people outside who knew nothing about it imagined the reverse. Let them remember what the cost of production was; that employers gave their time from Monday morning till Saturday night, and very often on Sunday; that a large amount of capital was employed in the trade, and that wages had to be paid to the workpeople, and they must then come to the conclusion that the profits were not sufficient. The additional burden of the Insurance Act, he had no hesitation in saying, swept away 15 or 16 per cent. of their profits. Then the increased cost of materials was burdensome. The colliery proprietors and the marl producers had for various reasons been compelled to advance their prices. When they calculated what these additional burdens meant to the trade, they found that although the output was greater than in the memory of any of them, the profits had not kept pace with it. Why should they banish the question of selling prices from their deliberations? Were he a manufacturer, he would certainly endeavour to persuade his brother manufacturers that of all questions that of selling prices was the most important. There ought to be no difficulty amongst a small body of fifty firms in coming to an understanding which would provide for a reasonable return to manufacturers and a proper wage for the workpeople. He had found very often that there was a want of confidence amongst manufacturers of different kinds, but that whenever they tackled a question and came to grips, and exhibited a determination to settle it fairly in the interests of everybody, that want of confidence evaporated, so that they were able to surmount difficulties which were only imaginary. If he were asked to give advice to a body of manufacturers like theirs, he should say, by all means and as soon as possible let them put their heads together to regulate selling prices, particularly at the present time, when the cost of materials and of production was advancing all round. If they did not do that, their profits would be nil, instead of fair and equitable. He should be delighted to hear that the Longton manufacturers had decided to deal with this matter, not in a perfunctory and half-hearted manner, but in a way which would produce the result to which they were entitled, and which he hoped they would see at the end of every year's trade.

The Chairman, in responding to the toast, congratulated them on the past year's turnover, which he believed had been a record one, but at the same time he regretted that it had been done under conditions which had not left them the profits they deserved. Referring to the report of the sub-committee of the Association which had inquired into the increased cost of production, he said some were of the opinion that they had under-estimated matters. The sub-committee had, however, set out with the idea that exaggeration would only damage their case, and their findings were such as could be proved up to the hilt. They showed conclusively that the advances in materials and cost of manufacture, without reckoning forthcoming increases, amounted to 13 per cent. on the turnover. On the other hand, it might be said that manufacturers were getting an advance of 15 per cent. on selling prices, but this was not a fact. It must not be forgotten that the discount would alone reduce it to 13½ per cent. Then there was a proportion of their production on which the advance could not be imposed, because of foreign competition. This proportion he estimated at 10 per cent., which further reduced the increase to 12 per cent., and even that was not being maintained all round. At a time when factories were fully employed, was there any reason why they should continue selling at the old and unremunerative prices? The custom of any intelligent body of men when there was an active demand was to make some substantial increase in profits, in order to protect themselves against the bad times which must inevitably follow. Economic pressure would compel manufacturers before very long to band themselves together to maintain better prices. He did not know any article that the china manufacturer used in quantity which was not in the hands of a ring or combine. He was not complaining; it was the inevitable outcome of present industrial conditions. With such examples, however, it passed his comprehension why they should be content to muddle through as they had done. The reason, it was said, was because the manufacturers could not trust each other, and the customers were playing the game of putting one against another all the time. Were they going to wait until half of them were in the Bankruptcy Court? He trusted that 1913 would see better trade conditions, that at the end of the year there would be no longer the underselling and insane internal competition which now existed, and that the profits would be better than had been the case in the last two or three years.

Mr. E. Hawley also responded, and afterwards Mr. A. Woolley proposed "The Visitors," to which Mr. A. Heath and Mr. J. F. Wiltshaw responded.

General Meeting.

On Dec. 31 a special general meeting of the Association was held at the Crown and Anchor Hotel, Longton, to consider the present position of the trade with regard to the increased cost of manufacture, and the consequent necessity for the maintenance, if not increase, of selling prices. Mr. F. H. Heath (chairman of the Association)

presided, and the very representative attendance included : Messrs. John Adderley, J. A. Arrowsmith (secretary), J. W. Beswick, H. J. Colclough, Victor Forester, J. Goodwin, R. Hawley, B. Hewitt, J. Hewitt, Hugh Irving, A. B. Jones, jun., G. H. Kent, John Kent, Meigh, W. P. Moreton, Nixon, H. J. Plant, Thomas Poole, Proctor, R. T. Schofield, John Shore, T. C. Wild, Wild, jun., Williams, S. Wilson, Arthur Woolley, and others.

The meeting devoted considerable time to considering an elaborate report which had been drawn up at the request of the Association by a small sub-committee, consisting of Messrs. H. J. Colclough, A. B. Jones, jun., and John Kent, setting forth the additional burdens which a typical china manufacturing business having a turnover of, say, £14,000 per annum, had to bear under the present conditions, as compared with four years ago, the years of comparison being 1908 and 1912.

The report stated that practically every material used by, and payment for services rendered to potters shows a substantial advance, to say nothing of the expense incurred through the operations of the National Insurance Act and the new Home Office regulations. The item of bone alone shows an increase of over £500 per annum. Fuel shows an advance of close on £400 per annum ; and other items, such as sagger marl, wad clay, building marl, gold straw, fritting materials, firebricks, stilts, and spurs, lead, borax, plaster, china-clay, china-stone, packing cord, wrapping paper, cotton rope, belting, timber, workboards, crates, &c., total to an increase of about £400 per annum. The important item of wages alone is responsible for considerable additional expenditure, in addition to which there are also increases in carting charges, shraff tip charges, lead insurance, employers' liability insurance, local rates, &c. It is impossible at the present juncture to accurately forecast the cost of the new Government Rules, but that they will entail a very heavy financial burden upon manufacturers goes without saying. The cost of the National Insurance Act to manufacturers can now be pretty accurately gauged. The total on a factory of the capacity previously stated cannot be far short of £1,600 per annum. To combat all these additional burdens, the sub-committee add, the china manufacturer has only one alternative ; that is, to increase his selling prices to a commensurate extent, and so pass a portion, at least, of the burden through the distributors, merchants, dealers, and shops to the actual purchaser. Any weakness with regard to selling prices can only, sooner or later, result in financial disaster.

After a prolonged discussion of the above report the following proposition was drafted :

> That this meeting, having considered the question of present increases in the cost of manufacture and impending further increases, is of opinion that a further advance of 5 per cent. is necessary, but adjourns the further consideration of the matter for the present, in the meantime resolving that the existing advance of 15 per cent. be rigidly maintained, and that instructions in accordance therewith be issued to all travellers.

Eventually, however, that motion was modified as follows :

> That this meeting re-affirms its opinion that the 15 per cent. advance, previously agreed upon, shall of necessity be maintained, and will use its best endeavours to secure that maintenance by giving the necessary instructions to travellers and agents.

A resolution was unanimously adopted expressing the best thanks of the Association to the sub-committee for their report.



Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

A TRADE INQUIRY FROM CANADA.

TO THE EDITORS OF "THE POTTERY GAZETTE."

Sirs,—We are desirous of establishing a Manufacturers' Agency here, and from inquiries we learn that there is big scope for Old Country chinaware. We know that you are in touch with this trade, and we wonder if you could help us by giving us the names of several good firms doing a general trade in this ware ? Or, to save time, perhaps you could get the firms to send us their catalogues (in duplicate) quoting best trade terms, and what commission they would allow us. The price must, of course, be right.

What we propose is that we should test the market with samples, and forward orders to the manufacturers, taking our commission on the sales. The sooner we get the samples the better, as we should like to be ready in the early spring. We would collect the accounts if desired, or they could be paid direct, and our commission remitted, whichever was considered most satisfactory. We would take care to open with first-class firms only. The proportion of bad debts is very small here.—Yours, &c.,

Agents (2845).

Winnipeg, Jan. 2.

[Letters from advertisers or subscribers will be forwarded to the writers of the above if sent to our office with sufficient postage.—Eds. P. G.]

THE CHINA AND GLASS DEALERS' ASSOCIATION.

TO THE EDITORS OF "THE POTTERY GAZETTE."

Sirs,—I am pleased to inform you that the result of my letter you so kindly inserted in your December issue has been very satisfactory, and had it not been for the busy season, I think more dealers would have written for particulars and joined our Association.

I notice a letter in your January issue, signed "A London Dealer," who says he is pleased to see the straw and packing charges referred to. He can help to bring about this object by joining our Association, and I shall be pleased to hear from him, and any other dealer who favours the object. I might also say that all dealers (large or small) would be wise in joining us, as we always welcome letters on any question relating to the trade, and of interest to the china and glass dealers.

I would like (on behalf of the Association) to thank those six manufacturers who have commenced the new year by including straw and packing charges in the cost of goods, and can assure them that the Association will remember the fact.

Our thanks are also due to you, Sirs, for the assistance you have given at all times by inserting reports of our meetings, letters, &c.—Yours, &c.,

W. Neaverson, Hon. Sec.

Kirkgate, Huddersfield, Jan. 24, 1913.

OUR PRIZE COMPETITION.

TO THE EDITORS OF "THE POTTERY GAZETTE."

Sirs,—We note your interesting competition in January issue. Have the papers to be entirely appreciative or also critical ? Must each paper be confined to one maker only ?—Yours, &c.,

"Subscribers."

Newcastle-on-Tyne.

[(1) An appreciation is sometimes all the more forceful if flavoured with criticism ; a knowledge of the weak

points of an article often leads to their being overcome. (2) Each contribution should deal with one line of goods only, but any competitor may send in several contributions if he wishes to do so.—Eds. P. G.]

Sirs,—Referring to your prize scheme, perhaps you will make it clear next issue whether you prefer an article on some one advertisement, or on the goods of several of the advertisers. Would it be well also to exclude references to the firms themselves as to their policy, &c. ? We should like to have the opportunity of praising some, but it would give us equal pleasure to speak our mind regarding the conduct of others, and if this was done you would not wish to print some otherwise very good papers.—Yours, &c.,

Jan. 22. An Irish Dealer.

[Our correspondent's first question has already been answered above. With regard to the second, which has also been put by another subscriber, the conduct of the firms advertising the ware is quite outside the scope of our offer, which refers to the merits of the goods themselves.—Eds. P. G.]

"LEFT OVERS."

To the Editors of "The Pottery Gazette."

Sirs,—The question of manufacturers packing small lots of "left overs" without previously informing the dealer, and obtaining his sanction, is certainly a just cause of complaint from the dealer's point of view, a growing evil, and very often greatly to the manufacturer's disadvantage, besides being a serious loss to the dealer, and the cause of much unpleasantness between the two. I have a case in point now before me of a few left overs which I had forgotten entirely about. Ordered five months ago, they are invoiced this morning with carriage and cost of package, packing out of all reason, and no fault of mine, but I have to suffer the loss. Had the manufacturer written to me stating that he had these articles (ordered last August) now ready, regretting the delay which had been quite unavoidable, and stating that he hoped that the goods supplied in August last had been disposed of—seeing it was so long ago—and that he would be happy to make up a further consignment of similar goods, which he was now in a position to supply quickly, and enclose these left overs, he would have had sent him an order for quite £6 worth of goods. This package having left, I defer giving the order, although all the last lot of goods from him have been sold, and would have been re-ordered to fill a package, had I been informed of these left overs being ready.

I think the warehouseman is to blame. He wishes to get his warehouse floor clear, and he does not care a button what cost he may be putting the dealer to. So soon as he can clear the goods out of his way, his mind is at rest.—Yours, &c.,

Jan. 22. A Lancashire Retailer.

STRAW AND PACKING CHARGES.

To the Editors of "The Pottery Gazette."

Sirs,—I have just had a visit from a traveller for a well-known firm, and he tells me before re-adjusting all prices, they are considering seriously the incorporating of these charges in prices. This is certainly a step in the right direction, as our manufacturers are often very inconsiderate about these charges, as I have just recently experienced.

Four T. sets (left over) 32s ; etc. and straw, 5s. 6d. ; carriage, 3s. 4d. ; ret. empty, 1s. 4d. ; over 30 per cent.

It's time they altered.—Yours, &c.,

Norwich, Jan. 22. J. A. Nickalls.

To the Editors of "The Pottery Gazette."

Sirs,—To the young retailer, the pottery trade bristles with technical difficulties and peculiar phrases ; but of the latter none seem so unintelligible (nor so unintelligent) as the printed note at the foot of the English pottery manufacturers' invoices.

"Delivery of Goods is at Works" : so reads that note ; and to the uninitiated it seems a very remarkable statement that "delivery"—to the buyer—should have been effected by the depositing of the goods on the manufacturers' warehouse floor.

In fact, the astonishment might well be shared by the experienced dealer, who is unacquainted with the history of the pottery trade, and the ancient custom of each buyer taking his horse and cart to the potteries to bring away his purchases.

In those days the phrase might be intelligible (if not intelligently stated) to the retailer ; but with the advent of the railway and the "traveller," this custom, of each man carting away his own goods, quickly became obsolete. With it, the custom of quoting prices "on warehouse floor" should also have become obsolete ; but the English manufacturer is loth to part with old methods, even if they are obsolete, even if the retailer does chafe against them, and even if the manufacturers and buyers in other trades jeer at such obsoletenss. And so, even to-day, in the year 1913, the invoices of the English china and earthenware manufacturers bear the legend, "Delivery of Goods is at Works."

Yet we, of the retail trade, have not lost hope. For, five firms at least have recognised that such method of quoting is obsolete, that it is unjust to the dealer, and detrimental to their own competing with the foreign manufacturers ; and they have responded to the request of the deputation of the China and Glass Dealers' Association that, in future, the cost of straw and packing shall be included in the prices quoted for goods. So that, even if the price is still for goods "on warehouse floor," such goods will, at least, be packed ready for handing to the railway company, and the buyer will now know that he has no additional charges to pay, other than railway freight.

To the manufacturers who have so decided to act, viz., Doulton & Co., Ltd., S. Fielding & Co., Ltd., Grimwades, Ltd., Wileman & Co., and Ashworth Bros., every credit is due for the prompt way in which they have complied with the wish of the retailers, once they were definitely assured that the wish was genuine and universal.

They deserve honour, too, in that they have stepped forward, as pioneers, where the many have hesitated. But they need have no doubt—the retailers will support them loyally ; and the rest of the manufacturers will be compelled to follow suit, if only in self interest.

For the China and Glass Dealers' Association—led by their indefatigable hon. secretary, Mr. W. Neaverson—are out to see this thing through, in justice to its members, whose numbers are increasing as rapidly as its purposes are becoming known.

Dealers, everywhere, regard the system of charging them with straw and packers' wages as a separate cost on the invoice, as unjust in the worst degree, seeing that they cannot verify or control either of these charges.

The incorporation of such charges into prices quoted for goods marks the advent of a more rational and up-to-date method of business ; it is a wise and just step by those who have taken it ; and other manufacturers will show their wisdom by following suit at the earliest possible date.—Yours, &c.,

Jan. 25. Novocastrian.

ANSWERS TO CORRESPONDENTS.

Exporters, Hamburg.—We have sent you by post a list of names of British makers of bottles such as you describe.

J. G. M., Sark.—We think from your description the jug is old "Parian Ware," but not old enough to have much value as a curio. We have in our collection a similar jug, marked as yours is, "No. 116." Ours is Parian, glazed white inside, with mauve body, and raised white military figures fighting. You should ask an antique dealer to value the copper plates you refer to.

P. H.—In the ordinary course of events, the registered design No. 16,155 that you quote should appear in our records for the year 1884. We have made a very long search for this number, but without success, and eventually found that no such a number had ever been given to a design manufactured in china ware. Evidently you have given us the figures incorrectly, and so our trouble has been wasted.

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c.; also marked local newspapers.

Mr. Edward Back, of Ford-road, Bow, E., fireclay merchant, left estate to the value of £13,845, with net personality £11,933.

Mr. G. W. Wagdin, aged 56, of 19A, Anfield-road, Liverpool, retired glass merchant and general glazing contractor, left estate to the value of £8,685, with net personalty £3,579.

British Clay Exports during the year 1912 were as follows:—China clay, 661,261 tons (£745,757); fireclay, 52,959 tons (41,749); other sorts, 75,989 tons (£60,279). Exports for 1911 were:—China clay, 634,808 tons (£712,342); fireclay, 51,433 tons (£37,075); other sorts, 63,225 tons (£48,208).

Diaries, Calendars, &c.—We have received and acknowledge with thanks: A neat block calendar made to hang or stand from William Varcoe & Sons, Ltd., Stoke-on-Trent.——A useful blotter, with calendar for the month of January, from the International Bottle Co., of 18, Fenchurch-street, E.C.——A wall calendar with coloured picture of a beautiful girl—a regular "peach"—from B. F. Drakenfeld & Co., of New York.

Mr. Thomas Cartwright, of South Bank, Brierley-hill, has just completed sixty years' service with Stevens & Williams, glass manufacturers, Brierley-hill. This is a creditable record for the workman and for the firm. It is interesting, at a time when the question of boy labour in glass work is a subject of Government investigation, to learn that Mr. Cartwright commenced work at the age of 11 years, and has been doing first-class work to the age of 71. The fact that Mr. Cartwright is still hale and hearty proves that the work in a glasshouse is not detrimental to long life.

Pilkington Brothers, Ltd., glass manufacturers, of St. Helens, are making improvements to their works, which include the taking over of the Ravenhead works, and also the premises formerly occupied by the Sutton Plate Glass Works. Sheet glass is to be manufactured at the Sutton works. Pilkington Bros., Ltd., have contracted with the Samuel Austin & Sons Co., of Cleveland, Ohio, for the erection of a window glass factory at Thorold, Canada. The factory will be equipped with machines like those of the American Window Glass Co., Pilkington Bros., Ltd., having acquired the Canadian rights in the invention.

The Proprietor of "The British and Oriental Depôt," Ocean-road, South Shields, has hit upon a happy idea of commemorating the Health Insurance maternity benefits. He is presenting to the insured mothers of the first six children born within the borough of South Shields, after 12 a.m. on Monday, Jan. 13, either of the following pieces of china:—A handsome cup and saucer, a beaker, or a china mug, whichever the parent may select. Forms of application for the gifts were supplied on application to the proprietor. The pieces are likely to become historical heirlooms in the families receiving them, and one hopes they bear appropriate inscriptions. As a retailer's advertisement, the scheme is original.

China Dealer and Antiquarian.—It is not uncommon to meet with a dealer who handles old china, but Mr. Frederick Holland, of the "Antique Galleries," 91, Central Mostyn-street, Llandudno, is an enthusiastic antiquarian. A number of interesting and valuable curios have passed through his hands, and visitors to the famous watering-place may always find some things of unusual interest in his collection. At the present time he possesses an original portrait of Shakespeare, painted in oil on panel measuring $5\frac{3}{8}$ in. by $5\frac{3}{4}$ in., by Joseph Taylor (1586-1653). This was exhibited at the great Shakespearian Exhibition at Earl's Court, London, from May to October last year. It is considered to be the most pleasing portrait of the "immortal bard."

The Package Question.—Doulton & Co., Ltd., Burslem, have issued a circular to the home trade only, in which they announce that to meet the wishes of their numerous customers they have decided to revise prices and incorporate in them the cost of packing, straw, &c., together with the advance made necessary by the new Government Regulations and the continuous rise in price of coal and other materials. For all orders received henceforth their conditions will be as follows:—Packages containing over £3 in value, full price allowed (when received in good condition); under £3, half-price allowed, ditto. All returned empties must be advised and will be credited promptly on receipt, so that in settling accounts no deductions will be allowed except those for which credit notes have been given. It is to be hoped that the trade will appreciate their resolve to settle once and for all the vexed question of packing charges.

Fire at Mortlocks', Ltd.—On the night of Jan. 1, about half-past nine o'clock a fire broke out in the premises at 466, Oxford-street, occupied by Mortlocks', Ltd., china and glass manufacturers. The outbreak was found to be in a flat on the upper floors, occupied by Captain N. Suart. The third and fourth floors were half-burned out and part of the roof destroyed. The contents of the flat were severely damaged, and two dogs and a parrot were suffocated by the smoke before they could be rescued. The fire is supposed to have been caused by a defective electric circuit. A large number of the Salvage Corps were busily engaged in covering up the valuable stocks of china on the lower floors. Owing to the water and heat the premises of Mortlocks', Ltd., were considerably damaged in the rear. Mr. Lewis was telephoned for and was soon on the scene. Mortlocks', Ltd., have since held a great clearance sale, at which exceptional reductions were made to clear the stock which had been spoilt or made incomplete owing to the goods being damaged.

Lead Poisoning.—From the statistics published in the "Labour Gazette" recently, it appears that the total number of cases of lead poisoning reported to the Home Office during December, 1912, was 67, of which 6 were fatal. In addition to these, 22 cases of lead poisoning in which there were 5 deaths, were reported among house painters and plumbers. During the year 1912 the total number of cases of lead poisoning reported under the

Factory and Workshops Act was 587, of which 44 were fatal, as compared with 669 cases and 37 deaths for the year 1911. Among house painters and plumbers there were 256 cases and 47 deaths in the year 1912, compared with 263 reported cases and 48 deaths during the year 1911. Of the 67 cases of lead poisoning reported for the month of December, 1912, under the Factory and Workshops Act, there were 11 cases and 1 death in connection with the china and earthenware trades. In the twelve months ending December, 1912, there were 80 reported cases and 14 deaths in our industries, as compared with 92 cases and 6 deaths in the year 1911.

The Merchandise Marks Bill (2).—The text has been issued of this Bill which has been introduced into the House of Commons by Mr. B. Peto to amend the law relating to trade marks and trade descriptions. The Bill provides that where there is on any goods a word, being, according to its ordinary signification, identical with, or similar to, a geographical name in the British Isles, or any inscription or description that would be liable to make the purchaser believe that the goods were manufactured within the British Isles, such goods shall be marked "British Empire Made" if manufactured in any part of the Empire outside the British Isles, or with the words "Not British" if outside the Empire. As safeguards against deception, all goods manufactured outside, and imported into, the British Isles bearing the trade mark of any manufacturer, dealer, or trader in the British Isles, or a colourable imitation thereof, or the name by which a patented article has become known, if by custom, trading, or use it has become distinctive as an article manufactured within the British Isles, shall be marked "British Empire Made" or "Not British," as the case may require. Articles contravening these provisions are not to be imported.

A Pleasant Annual Gathering.—The employees of Thomas Goode & Co., the well-known glass and china retailers of South Audley-st., London, W.C., recently spent a happy evening in company with the representatives of the manufacturers of pottery and glass with whom the firm do business. This has become an interesting function following the annual stocktaking, and on this occasion about 140 sat down to dinner at the Holborn Restaurant. Mr. Minton Goode presided, supported by Mr. Herbert Goode in the vice-chair. To mention the names of the guests would furnish a list of the principal agents and representatives of the pottery and glass manufacturers of the country. The Chairman gave the visitors a hearty welcome, and said he was pleased that the efforts of his brother and himself to promote a feeling of reciprocity and goodwill between them all had been so greatly appreciated. He took that opportunity of thanking the staff for the assistance the firm had received from them during the past year. He hoped the present would be one of a long series of annual meetings for good cheer and good fellowship and for the promotion of that good understanding which would promote harmony in business and make business itself a pleasure. In addition to those of "The King" and "The Firm," several toasts were given and cordially responded to, the speakers including Mr. E. Carbin, Mr. T. Brunton, Mr. F. Abraham, Mr. J. W. Walton, Mr. Charles Green, and Mr. Shelley. An excellent musical programme entertained the company until midnight.

Liens, Debentures, Satisfactions, &c.—Cauldon (Brown-Westhead, Moore & Co.), Ltd., Stoke-on-Trent.—Reg. Dec. 23, supplemental trust deed increasing the amount of prior lien deb. stock secured by trust deed of Nov. 28, 1912, from £20,000 to £25,000; charged on equitable interest as in trust deed of Nov. 28, 1912, and a capital redemption policy of assurance for £5,000, also a general charge.——Edmonton Glass Works, Ltd.—Satisfaction reg., £560: part of amount reg. Aug. 19, 1911.——Fayle (B.) & Co., Ltd., Corfe Castle.—Reg. £6,000 debs.; secured by general charge, except real and personal property, hereafter acquired.——North Devon Clay Co., Ltd., Great Torrington.—Satisfaction reg. for £1,000, part of £3,000.——Triplex Safety Glass Co., Ltd., London, W.—Satisfaction reg. for £2,500. Also reg. Dec. 23, £2,500 charge, to Cox & Co.; charged on company's right to receive 2s. 6d., 7s. 6d., and 5s. per share due on application allotment, and on first call in respect of 9,759 shares of £1 each, together with 5s. per share, the balance remaining uncalled on said shares, and all other (if any) uncalled capital.——Aston Magna Brick and Tile Co., Ltd.—Reg. £1,560 debs., part of £10,000; secured by general charge.——Bishop's Stortford Brick & Tile Co., Ltd., Bishop's Stortford.—Reg. £600 debs.; secured by general charge.——Cornish Kaolin, Ltd., London, E.C.—Reg. £8,100 debs., part of £25,000; secured by general charge.——Haunchwood Brick & Tile Co., Ltd.—Satisfaction reg., £1,500; balance of amount reg. Dec. 17, 1907.

Stourbridge Art and Technical School.—The annual exhibition and distribution of prizes in connection with this school took place on Jan. 6. Very creditable work was shown in a group of original designs for wine glasses, and also in a sheet of designs for sweet dishes by Miss Greenfield, who was awarded a first prize. Models made from the designs by a local glass manufacturing firm were exhibited. They consisted of a wine glass, a sweet dish, and a delicately tinted comport with a graceful stem. James Moxon gained first prize for a range of designs in glass and silver, and James R. Wheeler exhibited a series of etched and engraved wine glasses. It was gratifying to have these illustrations of the practical utility of the students' work. Mr. J. S. Williams-Thomas, J.P., chairman of the Higher Education Committee, presided at the distribution of prizes, when the committee's annual report was read by Mr. W. M. Robins, the clerk. The report said that the works submitted to the Board of Education were of the usual high merit, and included several excellent designs for glass, and it was a matter for regret that the Board did not make any awards for designs for glass in the National competition. Mr. Williams-Thomas' prize of £1 for the best work on the art side of the school was won by Amy S. Greenfield, and Mr. Boyt's prize of £1 for the best work on the mathematical side by Percy James. In introducing Mr. Watson Smith, who distributed the prizes, Mr. Williams-Thomas referred to the great interest taken by that gentleman in the schools. He gave a résumé of the work of the school, and said great credit was due to the teachers. The manufacturers in that district had very splendidly benefited from those classes. The best tuition under a foreman or a manager, though good of itself, could not have the same good effect. Great responsibilities rested upon the parents, who, he hoped, would wisely discharge them. In distributing the prizes, Mr. Watson Smith delivered an instructive address on art generally and on art schools particularly.

NEW COMPANIES, COMPANY REPORTS, &c.

Great Treverlyn China Clay Co., Ltd.—Registered capital, £12,000 in £1 shares. Objects indicated by title.

Carnsmerry China Clays, Ltd.—Registered capital, £10,000 in £1 shares. Objects, indicated by title.

Goonamarth China Clay Co., Ltd.—Registered capital, £7,500 in £1 shares. Objects indicated by title. Registered office, Fore-street, Copperhouse, Hayle, Cornwall.

Whitehaven Brick and Tile Co., Ltd.—Registered capital, £5,000 in £1 shares. Objects indicated by title. Registered

office, Brickworks, Low-road, Whitehaven, Cumberland.

Mortlocks Ltd.—At a general meeting of the shareholders held at 466, Oxford-street, on Dec. 31, Mr. J. S. Lewis was unanimously elected a director of the company.

Universal Non-Refillable Bottles, Ltd.—Registered capital, £15,000 in £1 shares. Objects, to carry on the business indicated by the title, and to adopt an agreement with A. A. Waters, W. H. Witherington and T. J. Ford. Registered office, 10, Drapers'-gardens, E.C.

Washington Sanitary Co., Ltd.—Registered capital, £2.000 in £1 shares. Objects: To take over the business of manufacturers of and dealers in sanitary and general earthenware carried on at Washington Works, Victoria-road, Hanley, or elsewhere, by H. W. and E. G. Shaw, as the Waverley Pottery Co. Private company.

Abenbury Brick, Terra-Cotta Works and Stone Quarry, Ltd.—Registered capital, £5,000, in £1 shares. Objects: To carry on the business of brick, tile, pipe and terra-cotta manufacturers, quarry proprietors, &c., to acquire certain freehold lands and hereditaments at King's Mills, near Wrexham, known as the Abenbury Brick Works, and to adopt an agreement with J. A. Wylie and W. Swan. Private company. Registered office, Wrexham.

Furnivals, Ltd.—As is well known, the business of the old firm of Furnivals, Ltd., which has been in the hands of a liquidator for some time, has now been acquired by Mr. Kenneth H. Bailey (son of Mr. J. C. Bailey), Mr. J. Bailey (son of Mr. C. F. Bailey), and Mr. W. Moore Binns. The London agency will remain in the hands of Mr. John Jenkins, 32, Ely-place, E.C., as hitherto. The name of the firm remains unchanged.

Cauldon (Brown-Westhead, Moore & Co.), Ltd.—Under the scheme of arrangement, which was approved by the creditors of the company and sanctioned by the Court, the unsecured creditors were to receive from the company and accept in satisfaction of their unsecured debts, fully paid 5 per cent. cumulative first preference shares of the company of £1 each, for an amount equal to 15s. in the £ on the amount of their unsecured debts, and that fractions of £1 were to be paid by the company in cash. The company have now allotted and issued these shares.

TENDERS ACCEPTED.

The following contracts have been let in Victoria by the Commonwealth or State Governments:—Defence: Mr. E. M. Bell, glass ware, &c. Post and Telegraph: British and Foreign Indent Co., 90,000 for insulators, 5·44d.; 180,000 do., 2·24d. each.

For the Bermondsey Borough Council:—J. Clark & Son, 1 crate 4ths 26 oz. English sheet window glass, £3 8s. 9d.

For the Elham Guardians:—Crockery, Upton Bros., Folkestone.

For crockery, for the Portsmouth Union:—Mr. Hancock, (workhouse) £3 7s. 6d. per lot., infirmary £29 2s.

CONTRACTS OPEN.

The Birmingham Guardians invite tenders for the supply of earthenware for year ending March 31, 1914. Forms of tender can be obtained from the Union Offices, Edmund-street, Birmingham, where they should be returned by Feb. 26, addressed to Mr. R. J. Curtis, clerk.

The Calcutta Corporation invite tenders for 350 gross Jena glass cylinders for Mansfield patent inverted burners. Outside dimensions $2\frac{1}{8}$ in. at top, $2\frac{3}{4}$ in. at bottom, and 3 in. long, with three lugs projecting $\frac{1}{8}$ in. for the purpose of securing to holder. Half quantity to be delivered within two months of receipt of order and balance within six months of receipt of order, delivered free of all charges at the lighting stores, Calcutta, including insurance against breakages. Tenderers must quote a price at per gross, Tenders, in duplicate, to be sent to the Vice Chairman of the Corporation by Feb. 10. Tenders must be accompanied by a remittance of $2\frac{1}{2}$ per cent. on the value of tender.

CHANGES OF ADDRESS, NEW PREMISES, &c.

Walker's China and Glass Stores have been opened at 61, Turnpike-lane, Hornsey, N.

Guerin & Co., china and glass merchants, have taken premises at 66, Hatton-garden, E.C.

The Working-man's China and Glass Stores have been opened at 129, Grove-road, Holloway, N.

Mr. W. Thompson, china and glass dealer, has relinquished the business at 82, Balham High-road, S.W.

F. W. Woolworth & Co., china and glass dealers, have opened premises at 142-4, High-street, Lewisham, S.E.

Nottingham's China and Glass Stores have been transferred from 60, Balham High-road, S.W., to No. 72 in the same thoroughfare.

Mr. Thomas B. Child, wholesale glass and china merchant, has removed to Summerley Works, Moor End, Idle, from 81, Westgate, Bradford.

Mr. N. W. Franks, china and glass merchant, 25, Chepstow-mansions, has opened additional premises at 20, Chepstow-mansions, Bayswater, W.

Mr. N. Donner, wholesale china, glass, and earthenware merchant, has removed from Middlesex-st., E., to larger warehouses at 36, Commercial-st., E.

Date Bros., wholesale and retail ironmongers, 10 and 11, Market-place, Frome, will shortly open a china and glass department at new premises in Frome.

The China Business of Messrs. Arnolds, at Great Yarmouth, has been transferred from Howard-street to King-street, Regent-street, and Regent-arcade premises.

Empire Notes.

Imports to Newfoundland during the last fiscal year included the following values, in dollars:—China and earthenware, total $36,827; from U.K. £33,253, from Canada $374, from U.S.A. $574. Glassware—plate glass, silvered glass, &c., total $30,847; from U.K. $13,258, from Canada $2,954, from U.S.A. $12,664.

Canadian Trade Inquiries.—A correspondent in Western Canada makes inquiry for the name of a Staffordshire manufacturer of dinner sets. A company, recently established for the manufacture in British Columbia of vitrified impervious shale bricks, require additional capital for extensions, and would like to correspond with interested persons. For further information, application should be made to the High Commissioner for Canada, 17, Victoria-street, S.W., mentioning THE POTTERY GAZETTE.

The Dominions Royal Commission.—The Royal Commission on the Natural Resources, Trade and Legislation of Certain Portions of His Majesty's Dominions issued their first interim report last month. The Commissioners state that they propose to proceed to the Dominion of New Zealand and the Commonwealth of Australia this month, and to visit in due course the Dominion of Canada and Colony of Newfoundland and the Union of South Africa for the purpose of their inquiry. They anticipate that it will be necessary at a later date to take supplementary evidence in the United Kingdom.

New Australian Pottery Works.—The Bulletin of Nov. 21 of the South Australian Official Intelligence Bureau at Adelaide, as quoted by the "Board of Trade Journal."

states that for some years past the manufacture of cement and various kinds of pottery has been carried on in South Australia, and recently a company was formed which proposes to extend an existing enterprise in this direction and also to make other commodities. The company, with a capital of £100,000. intend erecting works at Port Adelaide for the manufacture of Portland cement, lime, fibrous ceiling, plaster of Paris, bricks, firebricks, roofing and flooring tiles, white and coloured glazed tiles, insulators, sanitary ware, and all kinds of refractory goods. The raw material for the manufactures will come from Yorke's Peninsula, where the company are said to possess supplies of gypsum, lime and fireclay of the highest quality and purity.

Foreign Notes.

Congratulations to the "Crockery and Glass Journal" of New York, on the sumptuous "Holiday Number," published on Dec. 19. This is now quite a hardy annual, and the latest specimen is fully equal to any of its predecessors. It contains 260 pages, and is profusely illustrated.

American Pottery Importers Arrested. — New York papers just received state that on Jan. 8 Leon and H. D. Bloch, members of the firm of L. D. Bloch & Co., of 44, West Broadway, had been arrested upon the complaint of Mr. W. H. Wemple, assistant Attorney-General, charging them with conspiracy to defraud the Government of Customs duties on china imported from Limoges, France. Other prosecutions on similar charges are expected to follow.

The United States Tariff.—During the past month the Ways and Means Committee of the House of Representatives have considered proposals for and objections to the reduction of the tariffs on imported pottery and glass. The manufacturers in each industry strongly opposed the recommendations of the importers and it is believed that no change will be made. With regard to pottery some allegations were made concerning the low wages paid in the English potteries which were alike uncalled for and unfounded. A motion to reduce the duty on china clay emanated from the paper trade and not from the ceramic industry.

Mr. Homer Laughlin, a well-known American pottery manufacturer, died at Los Angeles, California, on Jan. 10, in his seventy-second year. Mr. Laughlin served with distinction during the civil war, and at its close entered the oil business in his native county, but without much success. He then turned to the sale of East Liverpool pottery, and in 1870 became an importer of English ware in New York. In 1876 he started as a manufacturer of white ironstone china at East Liverpool, Ohio, founding the business of the Homer Laughlin China Co. In 1897 he sold his pottery business, and moved to California, where he had large property interests. His wife predeceased him, but he leaves one son and one daughter.

Russian Mirror Glass Syndicate.—The whole Russian mirror industry is at present united in a syndicate. There are only four mirror factories in Russia, namely the Moscow Glass Industry Co., the Russo-Belgian Co. for the production of mirror glass (formerly O. A. Beklemisheff, the South Russian Mirror Co., and the Northern Mirror Industry Co.—joined in the Association for the Sale of Russian Mirror Factories' Products. This syndicate was formed in 1903 because of over-production in Russia. The various factories were originally built of a capacity larger than the demand for mirror glass in Russia, which members of the Syndicate say amounted to 200,000 metres in 1912, whereas the normal productivity of all the four factories named is 450,000 metres each per year-minimum. The South Russia and North Russia Co. can each produce, if required, 225,000 metres a year. and years have been known when the country's demand made only 100,000 metres. Now, according to agreement, the Russo-Belge and the Moscow Co.'s are to stop production for a certain annual compensation. Mirror glass has hitherto been but an article de luxe in Russia; in which respect she lags far behind other European countries.

International Plate Glass Trust.—A correspondent of the "Times" reported from Brussels on Jan. 17 that negotiations have resulted in the definitive formation until Aug. 17, 1924, of the plate-glass trust referred to in my despatch of Dec. 3 last, under the name of "Union Continentale Commerciale des Glaceries." The main purpose of the scheme is to centralise in Brussels the commercial services of nearly all the Continental plate-glass works, and to form a "comptoir de vente" of the industry, in order to suppress all competition, not only as regards prices and conditions of sale, but also as to the conditions of packing and the quality of plate-glass. A capital of 2,000,000 francs (£80,000) has been subscribed by the interested companies, 13 in number, of which 5 are Belgian, 1 Dutch, 3 French, 1 Austrian, and 3 German. The Compagnie des Glaces de Floreffe and the Société des Glaces Nationales at St. Roch Auvelais, near Charleroi, have hitherto not adhered to the new combination,which is to work in complete independence of the "International Plate Glass Convention" renewed in November last for a period of ten years, viz., also until Aug. 17, 1924. The managing board includes MM. Lucien Delloye (France), J. Henin and Jules Detry (Belgium), and Grossbüning (Germany).

United States Appraisement of British Earthenware.—A decision in connection with English earthenware imported by Johnson Bros. has been handed down by Reappraisement Board No. 2. The Board also filed an opinion, which is a rare occurrence in cases on value. Earthenware of the kind in question, while sold in the open market abroad, is made only on order, and deliveries do not take place till several months after the order is placed. In the present case orders were placed prior to May 1, 1912, but the goods were not shipped until Aug. 21. In the meantime the manufacturers issued circulars stating that on any orders taken subsequent to May 1, 1912, the price would be 2½ per cent. above that on orders received prior thereto. Johnson Bros. entered these goods, although shipped on Aug. 21, at the price which prevailed at the time their orders were placed. The Appraiser, however, advanced the shipment 2½ per cent. on the market value at the time of exportation, although it was conceded that the invoice represented the correct price paid. On appeal to General Appraiser Hay the appraised value was affirmed, but on appeal to the board it was contended by the importers that the goods were not actually sold until delivered, and that as sales were the best evidence of market value the board should consider the goods as sold at the time of delivery. This position has been sustained by the board in an opinion quoted by the New York "Crockery and Glass Journal," as follows :—"There had been no sales of merchandise of the character of that here under consideration at the advanced prices at the time when these goods were shipped. Purchases of such goods are made on contracts made some time in advance of the date of delivery. As no stock is carried, the goods must be manufactured. The only recorded sales are those made on orders placed some time last year, and these are now being delivered as in this case. Goods at the advanced prices will be delivered some time next year. They did not exist at the time of issuance of notice of an advance, nor even when the goods here in

question were shipped. If a quotation or notice of advance fixes the market price it would follow that notice of a reduction would also fix the market price. This would be most dangerous and would open the way to fraud, for a low price might be quoted and goods could be passed on that basis, although it might happen that when actual transactions occur the seller would not sell at the lower price quoted. Meanwhile, the merchandise already imported would pay duty on a valuation below the market price. Neither a bid or offer establish a market price. A contract for sale does not constitute an actual sale. The goods may never be delivered by reason of a failure to carry out the contract. Actual delivery must be made to constitute a sale. The proper and safest method of fixing the market value is to base it on actual transactions, and that has been the custom for many years.''

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.



347,539. Porcelain and earthenware. Class 16. G. M. Wahliss. 152, 182 and 186, Kulmerstrasse, Turn-Teplitz, Bohemia, Austria. Address for service in the United Kingdom is: c/o Marks & Clerk, 57 and 58, Lincoln's Inn Fields, W.C.

EWLOG.—346,117. Porcelain and earthenware. Class 16. Charles Davison & Co., Ltd., Mold-road, Ewloe Barn, Ewloe, near Chester.



344,902. China ware (made in England). Class 16. No claim is made to the exclusive use of the cup and saucer device. The Blyth Porcelain Co., Ltd., High-street, Longton. By consent.



347,308. Fictile ware, included in Class 16. W. Green, View Bank, Willow-avenue, Marple, Cheshire.



344,801. Ironstone china. Class 16. J. & G. Meakin, Ltd., Eagle Pottery, Ivy House-road, Hanley. By consent.

WOTTER. 347,355. China Clay. Class 4. The Dartmoor China Clay Co., Ltd., 151, Cannon-street, E.C.

MASKAR. 347,351. Crucibles and other similar fire-standing goods included in Class 16. ''Graphites-Maskar'' Société Anonyme Française, 4, Rue Ste Anne, Paris, France. November, 1912. Address for service in the United Kingdom is c/o G. F. Redfern & Co., 15, South-street, Finsbury, E.C.



METALLIC COATINGS FOR GLASS.

(SPECIALLY TRANSLATED.)

SILVER.—(1) A solution of 10 parts of silver nitrate in 80 parts of distilled water is poured into a solution of 8 parts of Seignette salt in 3,840 parts of distilled water, the whole being then boiled and filtered. A second solution is prepared, containing 10 parts of silver nitrate in 80 of distilled water, and treated with ammonia until the precipitate first formed disappears, after which it is diluted with 900 parts of distilled water and filtered. Equal parts of these two solutions are mixed for use.

(2) One gram of silver nitrate is dissolved in 20 grams of distilled water, and treated with ammonia until the resulting precipitate is redissolved. The solution is then mixed with one of 1 gram of caustic potash in distilled water, treated with ammonia, without dissolving the precipitate completely, and filtered. The filtrate is treated with silver nitrate solution until it assumes the colour of weak tea, and is diluted with distilled water until 100 c.c. of the liquid contain about 1·4 gram of silver nitrate, the whole being mixed with a solution of glucose, containing half as much sugar as there is silver in the silver nitrate solution.

(3) One hundred grams of silver nitrate are dissolved in 62 grams of pure ammonia (sp. gr. 0·870 to 0·880), 600 grams of distilled water being added. After filtration the solution is diluted with 16 times its own volume of distilled water, a solution of 7·5 grams of tartaric acid in 30 grams of distilled water being added drop by drop.

(4) Silver nitrate 0·5 gram, and Seignette salt 10 grams are dissolved in 250 c.c. of boiling distilled water, and diluted to make 1,000 c.c. A second solution is prepared from 6 grams of silver nitrate and 3 grams of ammonia in 1,000 c.c. of distilled water, and the two solutions are united for use.

(5) Ten grams of silver nitrate, dissolved in 50 c.c. of distilled water, are treated with sufficient ammonia to redissolve the precipitate first formed. A solution of silver nitrate (1 : 5) is then added drop by drop until the liquid is slightly opalescent, the volume being made up to 1,000 c.c., and the solution filtered after standing. A second solution is made by dissolving 20 grams of Seignette salt and 20 grams of white candy sugar in 200 c.c. of distilled water, and treated with 4 grams of silver nitrate dissolved in 20 c.c. of distilled water, being shaken up, boiled for half an hour, and diluted to 2,000 c.c. with water. For use the two solutions are mixed in equal volumes.

(6) Silver nitrate 100 grams, dissolved in distilled water 100 c.c., treated with ammonia until the precipitate redissolves, and made up to 1,000 c.c. For use, this solution is mixed with 500 c.c. of a 1 per cent. solution of formaldehyde.

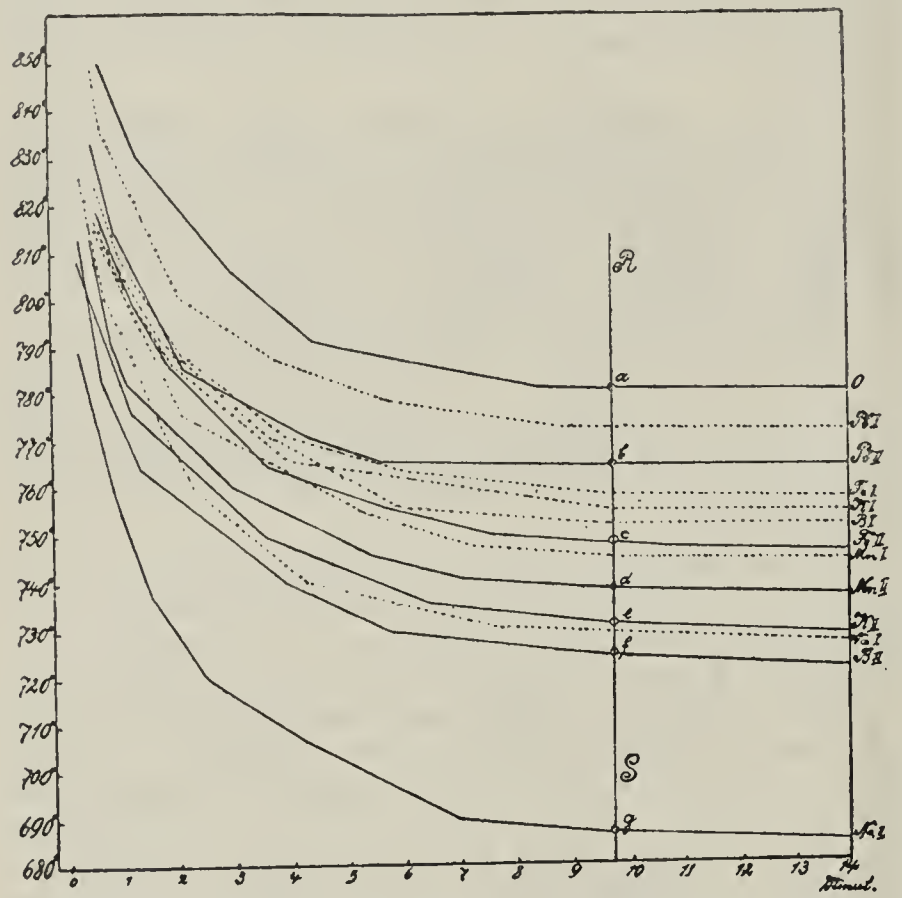
GOLD.—(1) Four volumes of a neutral solution of gold chloride (1 : 120) and 1 volume of caustic soda (6 : 100) are treated with 1-16th volume of a reducing liquid composed of—starch sugar 2 grams, water 24 c.c., 80 per cent. alcohol 24 c.c., and aldehyde (sp. gr. 0·870) 24 c.c.

(2) Four volumes of gold chloride solution (6-7 : 1,000) are mixed with 1 volume of caustic soda (50 : 1,000). The reducer employed per litre of this mixture may be either: (*a*) 3 c.c. of concentrated glycerine; (*b*) 5 c.c. of 90 per cent. alcohol, with an equal volume of a 40 per cent. solution of glucose; (*c*) 30 c.c. of a mixture of equal parts of 90 per cent. alcohol and sugar solution, 12 grams of white sugar, 100 c.c. of distilled water, and 2 grams of nitric acid (sp. gr. 1·34), boiled for a quarter of an hour; or (*d*) 40 c.c. of butyl-, propyl-, or amyl alcohol.—Sprechsaal Kalender.

FLUXES IN GLASSMAKING.

(SPECIALLY TRANSLATED.)

THE chief fluxes used in glassmaking are the alkalis soda and potash, or their salts; but the oxides and salts of lithium, rubidium, caesium, lead, manganese, iron, calcium, and boron, must also be included in this category. Owing to the unfavourable properties imparted to glass by a high proportion of alkali fluxes, it is often advantageous to replace them in part by some of the others mentioned above, the cheapest of them, i.e., iron and manganese, being found admirable for use in making bottle glass, though their intense colouring power renders them unsuitable for some purposes. Lead oxide is too dear for common glass, and is chiefly restricted to crystal and optical glass. Latterly boric acid has come into favour, owing to its beneficial influence on the physical properties of glass as compared with that of the alkalis; but, unfortunately, it cannot always be used in place of these latter, because the resulting glass is hygroscopic, the acid is volatile, and therefore considerable loss is



sustained in the melting process; and though a small addition of boric acid improves the brightness of glass, the presence of larger quantities causes the glass metal to corrode the material of the pots, and gives a cloudy product. Finally, boric acid is much dearer than the alkalis.

Though the influence of the fluxes on certain of the physical properties of glass has been investigated to some extent, there is a lack of determinations giving numerical expression to the relative action of different fluxes; for though Greiner measured the effect of the composition of certain mono- and di-silicates on their viscosity, he omitted the tri-silicates, which correspond approximately to technical glasses. This investigation has been taken up by the author in respect of the oxides of the alkali metals, iron, manganese, lead, and boron, the glasses used for comparison differing solely in composition by the percentage of the oxide fluxes. The glasses were prepared from a stock glass of known composition and change in viscosity at high temperatures, this stock being remelted with different proportions of the various fluxes: chemically pure soda and potash, ferric oxide, lead peroxide, manganese dioxide, and dehydrated boric acid. The experiments were so conducted as to give 4 or 8 per cent. of the respective fluxes in the finished glass, or as near these proportions as is possible in practice.

The results were plotted in a curve (see Fig.), the ordinates representing temperatures, and the abscisses viscosities. Examination of the pairs of curves relating to the two different percentages of a given flux will show that the decrease in viscosity is not proportional to the increase in the amount of flux. For example, whilst for instance Na I runs about midway between O and Na II—or, expressed in another way, the fusibility of the glass Na II (glass O, plus 8 per cent. of Na_2O) has altered twice as much as that of the glass I (glass O, plus 4 per cent. of Na_2O)—the curve Mn I approximates much more to the curve Mn II than to O, although from the amount of added flux it might be regarded as intermediate between them. The same, but in a less decided manner, applies to the curves Fe I and Fe II. These results indicate that ferric oxide and manganese oxide act only as decided fluxes when used in small quantities, their action diminishing when larger amounts are taken. In the case of the other fluxes, i.e., Na_2O, K_2O, B_2O_3 and PbO, within the limits of the experiments, the fusibility of the glass varies in almost exact proportion to the quantities added.

A comparison of the curves Pb II, Fe II, Mn II, K II, B II and Na II, all from the same glass (O) with an addition of 8 per cent. of the flux in each case, reveals the great divergence in the action of these fluxes. If the whole of these curves be intersected by the straight line R—S parallel to the vertical axis of the co-ordinate system, the points a, b, c, d, e, f, of equal viscosity are obtained. The resulting segments a b, a c, a d, a e, a f and a g then indicate the differences in temperature at which the several glasses attain the same viscosity, and consequently the extent to which the fusibility of the glass is affected by a given percentage of the different fluxes. In the present instance, for 8 per cent. of flux, the differences are as follows, in degrees C. :—

PbO	a b	= 780°—762° = 18°
Fe_2O_3	a c	= 780°—748° = 32°
Mn_2O_3	a d	= 780°—738° = 42°
K_2O	a e	= 780°—732° = 48°
B_2O_3	a f	= 780°—724° = 56°
Na_2O	a g	= 780°—685° = 94°

The diagram also shows that in the case of ferric and manganese oxides an addition of only 4 per cent. would have been of a greater benefit.

ANALYSES OF THE EXPERIMENTAL GLASSES.

	SiO_2	Na_2O	K_2O	Al_2O_3	Fe_2O_3	CaO	Mn_2O_3	B_2O_3	PbO
O	69,95	13,65	1,00	2,28	0,35	12,65	—	—	—
Pb I	68,35	12,62	0,90	2,24	0,42	11,68	—	—	3,76
Pb II	65,37	12,44	0,83	2,30	0,29	11,19	—	—	7,67
Fe I	67,88	12,97	0,90	2,07	4,21	11,88	—	—	—
Fa II	65,54	12,36	0,88	2,22	7,65	11,42	—	—	—
Mn I	67,90	12,60	0,92	2,20	0,30	11,72	4,24	—	—
Mn II	64,23	12,72	0,84	2,32	0,38	11,52	7,81	—	—
K I	67,82	12,90	4,72	2,16	0,20	11,80	—	—	—
K II	64,11	12,46	9,12	2,38	0,42	11,38	—	—	—
B I	68,25	12,93	0,82	2,04	0,40	11,49	—	4,07	—
B II	63,95	12,83	0,77	2,42	0,41	11,40	—	8,22	—
Na I	67,19	17,46	0,90	2,34	0,44	11,68	—	—	—
Na II	63,96	21,32	0,88	2,20	0,38	11,32	—	—	—

The result of the investigation, as reported by V. Vesely in "Sprechsaal," shows that soda, potash, lead oxide, and boric anhydride increase the fusibility of glass in direct proportion to the amounts added, whereas ferric and manganese oxides are only efficient as fluxes when used in small quantities; finally that when the amount of oxides used is 8 per cent., the action of the fluxes increases in the following order: lead oxide, ferric oxide, manganese oxide, potash, boric anhydride, and soda.

Fragments.

¶ A Retailer's appreciation.—The following comment accompanied a renewal subscription received last month: We again wish to state how greatly we appreciate THE POTTERY GAZETTE; indeed, it contains most valuable information.

* * *

¶ A Colonial Office report from Mauritius states that of five commercial travellers who deposited samples at the Customs, all representing foreign firms, one travelled in earthenware. So keenly do outside competitors look after the possibilities of doing trade within the Empire.

* * *

¶ Don't be daunted by all the pessimistic prophecies about 1913 being an unlucky year. Very likely the bad luck is coming to your competitors.

* * *

¶ A China group has been formed at the House of Commons. This does not imply that our legislators are going to take up potting as well as cabinet-making as an occupation. The group consists of members of Parliament, men of letters and science, and other distinguished personages, who desire to watch and conserve the interests of the new republic in China.

* * *

¶ A North Country subscriber informs us that his January number of THE POTTERY GAZETTE, when it arrived, was smeared all over with a black fluid outside, but the inside had not much suffered. We presume the Suffragists are the cause of this, and take this opportunity of announcing that we will replace any copies that are spoilt in transit if they are returned to us immediately on receipt.

* * *

¶ "Protection means to protect those who are protected." So says a Chicago paper, and whoever writes from there ought to know.

* * *

¶ A lively rhyme in a German contemporary suggests that those who find time hanging heavily on their hands need only accept a three months' bill, and they will find the days and weeks until it falls due.

* * *

¶ The agricultural returns form for income tax purposes now contain a special heading for produce grown under glass for market.

* * *

¶ The saying that "pottery is to the archæologist what fossils are to the geologist" is again emphasised in a letter sent to the "Times" by two investigators who believe that they have discovered the site of the ancient Phœnician colony of Tarshish, in Spain. They write:—"Don Angel Munoz Bosque has made exhaustive chemical analysis of Spanish pottery, tiles, and clay products generally of different periods and classes. To this gentleman's researches we owe the knowledge that the pre-Roman inhabitants of Andalucia made a certain kind of fine pottery with a beautiful glaze, which has hithero been attributed to the Arabs. Don Angel has found on analysis that the chemical constituents of the glazed pottery from the Cuesta del Rosario differ essentially from those of the famous iridescent glaze of the Spanish Arabs; so that in addition to the discovery of specimens far below the Roman level in these excavations, we have also the evidence of a different process of manufacture."

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

SINCE the Christmas holidays have been over manufacturers and their staffs have been busy with the multitudinous duties which the preparations for another year's business necessitate—stock-taking, the designing of new patterns and the getting out of samples—and now travellers are all on the road again ready to receive the steady supply of good orders which it is hoped awaits them in the coming months. The first few weeks of the year are never productive of any considerable volume of business, particularly from home consumers, and that has been the case on this occasion, though both in regard to the earthenware and china departments, I understand, the orders so far received are generally above the average, both in numbers and value. That, at any rate, is a very hopeful sign. The same remark applies to the export trade. The South American markets, notably the Brazilian, are buoyant, and Australia is sending a satisfactory quota of business. The Canadian demand is good for the time of the year, but, of course, considerably below that of a few months back. This, however, is only customary, for during the late and early months, when the winter freight rates are in operation, the bulk of goods sent to the Dominion is always smaller. Nevertheless, satisfactory orders are coming to hand, and the prospects are bright. The South African trade has fallen away somewhat of late, but it is hoped that the set back in a market which has improved considerably during the last half year may be only temporary.

Manufacturers dealing largely with the United States are looking anxiously for some revival in the demand from that market. The hope that it might eventually come through a reduction of tariffs has, however, been shattered, and to say that manufacturers are intensely disappointed is not to exaggerate the effect of the announcement made early in January. On the 8th of that month, Mr. Underwood, Chairman of the Ways and Means Committee of the American House of Representatives, announced that as regards pottery the Committee was in favour of retaining the tariffs of 55 and 60 per cent. now in operation, "owing to the highly competitive conditions of the industry in Europe." The New York correspondent of the "Standard" further stated that the reason for the decision not to reduce pottery tariffs is obviously to isolate the American pottery industry from practically all competition, and to enable it to develop still further.

The necessity for uniform selling prices at enhanced rates to cover the increased cost of production has been frequently referred to. Members of the Manufacturers' Association have been engaged for some time considering this difficult question in regard to the general earthenware trade, and have had the expert assistance of an accountant in the matter. So far no statement has been issued or allowed to become public on the matter, but I learn that their consideration and investigation of the subject has enabled them to draw up a new gross price list for export markets, the list to be subject to varying discounts according to the classes of goods. This has now been sent out. I am not in a position to state how this list compares

with prices heretofore prevailing, but it has naturally been framed with the object of covering the burdens which have of late raised the expenses of manufacturers so considerably. But an object even more important than enhanced prices is the matter of uniformity throughout the trade which it is hoped will be secured as a result, and which must of necessity be for the benefit of all concerned in the potting industry. Most of the readers of THE POTTERY GAZETTE will, however, be more concerned on the subject of prices for the home market. Nothing has as yet been decided by the Manufacturers' Association on that question, but a committee has been appointed by them to investigate and report on the matter. In this instance also the object is to secure uniformity, not only of prices throughout the trade, but likewise uniformity in methods of charging for goods, in order to abolish the present varying systems of adding the "plussage" to the invoice or charging the advance in the price of goods. In regard to enhanced selling prices, there have to be considered the increased cost of production now prevailing, and also the additional cost to be entailed by the operation of the new Special Regulations. Further, the committee have to take into account the question of packing and packing material charges, which the Manufacturers' Association promised should be considered, together with the inclusion of the "plussage" in the selling price, when the deputation of the China and Glass Dealers' Association interviewed them at Stoke. A new price list, abolishing all additions and extras, involves many difficulties, but if it could be arranged it would be very welcome to dealers.

The china manufacturers have also been giving careful attention to the question of selling prices, in view of the fact that the 15 per cent. increase agreed to last year has not been maintained as it should have been in face of the greatly enhanced production cost; and the members of the organisation, the English China Manufacturers' Association, as will be seen from a report elsewhere in this issue, have decided that the advance shall be rigidly enforced. A further increase of 5 per cent. has been suggested, but for the present this lies in abeyance, the object being to first secure unanimity of action amongst manufacturers on the existing advance, and to put an end to the underselling which unfortunately has obtained. It is certainly to be hoped that the increase will now be uniformly maintained. The higher price for goods is fully warranted, and will be even more so in the near future. As a matter of fact, since this meeting was held the anticipated further increase of 5 per cent. in miners' wages has been granted. This presumably will mean another 6d. per ton on the price of manufacturers' fuel, thus adding further to the great increase in coal bills which has followed the miners' strike.

The value of exports in December was substantially better than in the corresponding months of the two preceding years, despite the falling off from the previous month. The figures were: £284,495 for December, 1912; £249,581 for December, 1911; and £246,447 for December, 1910. The American business fell to £25,470, or nearly £3,000 less than in the corresponding month of 1910, though this was not so low a figure as for some of the early months of the year. Declines of about £2,000 also took place in both the South African and British East Indian markets as compared with the same month of the preceding year. With these exceptions the December business was invariably better than during the same period of the previous twelve months. The Canadian market headed the list with £33,387, which was approximately £8,000 better than in the corresponding month of 1911, but £16,000 less than in the immediately preceding month. A remarkable volume of goods was sent to Brazil, the month's business not being far short of the Canadian. It reached £32,206, as against £17,155 in December of 1911, and £17,699 in November last. The Argentine trade was also good at £26,955, being better than in the preceding month and the same month of the previous year. As a matter of fact, the South American shipments were by a considerable margin better in December than in any month of the year, good though that trade has been. The Australian and New Zealand exports were likewise excellent features of the month's oversea business, the amounts being: Australia, £34,869, as compared with £27,066 in the same month of 1911, and £25,377 in November last; New Zealand, £14,669, £11,025, £11,495. The Continental trade, though less than in November, was rather better than in the corresponding month of a year ago. Business with "other countries" was worth £69,891, or £4,800 more than in December, 1911.

As was anticipated, the year's exports created a new record in point of value, totalling up to £3,151,586, compared with £3,029,384 in 1911, and £2,779,559 in 1910. On the other hand, it has to be pointed out that in quantity they failed to reach the preceding year's total, the figures being 3,857,161 cwts. in 1912, as against 3,995,137 cwts. in 1911, and 3,515,525 cwts. in 1910. The details as to descriptions of goods show that more than half the total value was represented by earthenware, the worth of which was £1,846,480. The china exports were only of the value of £176,522. A large increase was recorded in respect of sanitary ware, the year's shipments being worth £529,469, or over £68,000 more than in the preceding year. In regard to destinations of exports, Canada has easily gained—for the first year on record—the premier place, the value of the goods sent to that market being £468,463, as against £395,124 in 1911, and £360,041 in 1910. The United States fell into a bad second place with a figure of £399,939, compared with £427,886 in the previous year. Unfortunately, there is no gainsaying the fact of the yearly decline of exports to this market, and the past year's business marks a low level. I have extracted the figures in regard to the United States market for the past eighteen years, and, as will be seen, they make very discouraging reading:—

1895	£955,593	1904	£555,549
1896	722,154	1905	508,053
1897	650,509	1906	572,465
1898	540,048	1907	614,164
1899	656,017	1908	465,224
1900	602,635	1909	481,576
1901	512,364	1910	506,486
1902	498,338	1911	427,886
1903	583,864	1912	399,939

The South American trade in the aggregate was better than in 1911, though the Argentine business was less. The figures are: Brazil, £234,056 in 1912, £211,755 in 1911; Argentine, £265,838 in 1912, £279,226 in 1911. The demand from the Antipodes was substantially better, the goods exported to Australia during the year being of the value of £324,413, as against £308,852 in 1911; and to New Zealand £132,741, as against £124,603. The revival during the later months of the year in trade with South Africa brought the figures for the past two years almost to a level, namely, £132,230 in 1912, and £132,720 in 1911. The British East Indian trade, which amounted to £229,237, was nearly £4,000 below that of the preceding year. The Continental exports were less in the case of Germany, but considerably better in the case of France, the figures for the latter being £99,811 in 1912, and £87,015

in 1911. Trade with "other countries" was so much higher as to suggest the increasing importance of some of the smaller markets of the world. The shipments in 1912 were of the value of £791,266, as compared with £748,332 in 1911. As with exports, so with imports, the values exceeded those of the preceding year, but the quantities were less. The year's imports were worth £998,205, as against £994,883 in 1911; but they amounted in weight to only 667,160 cwts, as against 756,939 cwts. in 1911. The re-exports of foreign and Colonial pottery during the past year were of the value of £87,804, as against £136,917 in 1911. and £150,770 in 1910. Deducting these from the imports, the net value of the past year's imports was £910,401, as compared with £857,966 in 1911, and £745,855 in 1910.

The new Pottery Regulations are to be put into operation in the form they assumed at the close of the Home Office inquiry which was concluded at Stoke on Nov. 27, for his Honour Judge Ruegg has now presented his report, and has made no further alterations in the rules than were arrived at by agreement at the inquiry. It will be remembered that all the objections raised by the Manufacturers' Joint Committee were settled by consent; and so far as they were concerned the only point of importance to be adjudicated upon by the Commissioner was in regard to the drawing temperature of ovens, which Regulation 10 (*d*) fixed at a maximum of 125 degs. Fahr. The manufacturers accepted that, although they contended that it would be very difficult to carry out; but the United Ovenmen's and Dippers' Society objected to it, and asked that the maximum should be reduced to 100 degs. In regard to this question, Judge Ruegg observed in his report, considerable evidence was given by medical men and others that the operation of drawing ovens was very onerous work, and that to carry it on in a temperature of 125 or even 100 degs. was exhausting and unhealthy. His sympathy inclined strongly towards those who urged this reduction, for he believed that such heavy work carried on in so high a temperature was most distressing, and eventually injurious to the workers. As the ovens were at present constructed, and having regard to the system on which the work was carried on in the Potteries, he found himself unable to recommend that any present alteration should be made in the maximum temperature proposed to be established by Regulation 10 (*d*). Though he regretted the conclusion he felt compelled to arrive at, he was satisfied that the proposed regulation as it stood would be a great advance on the system hitherto existing.

Although the Commissioner was not able to recommend an alteration of the draft rule, he wished to suggest that the factory inspectors should be instructed to urge upon all employers in the industry the utility and importance of providing all ovens with cooling dampers, back clammings, or other devices for hastening the operation of cooling. According to the evidence of Mr. Bernard Moore, cooling dampers already existed in a majority of ovens in the Potteries, but a very small proportion—somewhere from 5 per cent. to 10 per cent.—had back clammings. To adopt these involved only a small expense, and they could be used in very many, though not all, of the existing ovens. He was satisfied that if brought prominently to the notice of the employers by the factory inspectors, they could and would be generally adopted, and that they would have a salutary effect. The Commissioner also mentions in his report the fact that one of the chief objections of the Manufacturers' Joint Committee was to the system of self-inspection proposed by Regulation 27. This rule as originally drawn required the person appointed to see to the observance of the regulations, to record weekly prescribed details in regard to prescribed questions concerning the observance of the regulations, and also required copies of the prescribed questions and weekly entries to be posted up in the factory and mess-rooms. The objection of the employers to assent to this rule before knowing what the "prescribed details" and "prescribed questions" would contain appeared to him to be reasonable. The parties asked permission to defer the further consideration of this rule in order to endeavour in conference to agree upon a new rule which might satisfy the objection and be equally efficient to secure the object aimed at. Subsequently, by agreement of all parties, a new rule was formulated and substituted for the former one. In his opinion, the new regulation effected substantially the object aimed at by the former one. The text of this new rule was quoted on page 71 of the last issue of THE POTTERY GAZETTE; it now devolves upon the manager of each department or some other appointed person to record breaches of regulations and what steps have been taken to remedy them.

Only one other matter was referred to the Commissioner, and that was raised, not by the manufacturers of the Potteries, but on behalf of the Scottish stoneware potters and a Chesterfield firm, who contended that stoneware factories should be relieved from the whole of the regulations and placed under Exemption No. 4, on the ground that there was no real difference between stoneware and salt-glazed coarseware, except the glaze, which was harmless. The claim for total exemption, the Commissioner remarked, was largely based on the argument that the processes of manufacture were the same as those employed in the making of salt-glazed coarseware, except as to the glaze, which in both cases was harmless; but Mr. Werner, one of His Majesty's Inspectors of Factories, pointed out that they were not the same in degree; that the works in which salt-glazed coarseware and no other pottery was made were generally smaller than stoneware factories; that the rapid drying in stoneware factories caused a lot of clay dust; and that the clay was not always the same. He further satisfied him (the Commissioner) that there were quite a number of small places where salt-glazed coarseware only was made, in which there was no great danger of dust and no great danger of persons carrying heavy weights; whilst in stoneware potteries the conditions as regarded dust, the necessity for sweeping the floors, the question of carrying heavy weights and such like matters were at least "as bad as you would find in the average pottery in Staffordshire." Stoneware factories were included in the definition of coarseware, and in cases where no other pottery was made were at present exempted under Exemption No. 3 from a great number of the proposed regulations. Having regard to the dangers which might exist in these factories, especially the danger arising from dust, he was not able to recommend that any other or further exemptions should be granted to them.

The question of an improved waterway from the Potteries to the Mersey is occupying the attention of the public men and manufacturers of the district, and the proposals are now assuming something like a definite form. On May 1 of last year a conference of Staffordshire and Cheshire authorities was held at Stoke, as a result of which an Advisory Committee was appointed to prepare a scheme. This committee invited Mr. J. A. Saner, engineer to the Mersey-Weaver Navigation, and Mr. H. Curbishley, canal engineer to the North Staffordshire Railway Co., to prepare a report on the cost of widening and improving the Trent and Mersey Canal sufficiently to meet the requirements of 100-ton boats, and on the probable increased traffic resulting from such improvement. At a meeting of the

Advisory Committee on Jan. 20, a joint report by Mr. Saner and Mr. Curbishley was presented, together with a supplementary report by Mr. Saner. It should be explained that at the present time the canal is only capable of taking 30-ton barges, that it has a large number of locks, and that the lengthy and inconvenient Harecastle Tunnels have to be negotiated. The joint report deals with two schemes—the first for improving the canal so as to take 60 to 70-ton barges, and the second to accommodate 100-ton boats. Mr. Saner, in his supplementary report, advocates the latter or even a larger scheme, and the Advisory Committee passed a resolution favouring a scheme providing for boats of "not less than 100 tons," and appointed a sub-committee to go into this scheme in detail.

Dealing with the 100-ton scheme, the engineers in their joint report quote from and adhere to the report which was presented by Sir John Wolfe Barry to the Royal Commission on Canals and Waterways. This provides for a canal to be usually 60 ft. wide at the surface, 32 ft. at the bottom, and 7 ft. deep, with a minimum headway of 9 ft. The engineers recommend that the canal should strike the River Weaver at Winsford Flashes, and by making $2\frac{3}{4}$ miles of new cutting join the present canal at Middlewich. This provides for the first 23 miles of the canal from the Mersey, $21\frac{1}{4}$ miles of which would be the River Weaver, the latter being already ample for much larger craft than any at present contemplated. Then there remains a further 18 miles to be dealt with before Stoke-on-Trent is reached. On this 18 miles there are now 34 locks, 62 bridges, 3 aqueducts, and the long Harecastle Tunnels. Sir John Wolfe Barry, in his scheme, makes provision for a new tunnel at Harecastle to replace the two existing ones. The old tunnel was commenced in 1766 and completed eleven years later. This is used for boats coming south, and is so small, that the boats have to be "legged" through by men lying on the deck of the boat and working it through by the pressure of their feet on the top of the tunnel. The "new" tunnel, commenced in 1824 and completed in 1827, has a towing path through it. The Royal Commission propounded two schemes for dealing with this part of the canal—one to enlarge the old tunnel, and the second to construct lifts at each end of the tunnels and carry an open canal over the summit of the Harecastle Hill. The Commissioners, however, did not recommend the latter on the grounds of initial and maintenance cost.

The engineers in their joint report, however, explain a third scheme which they regard as perfectly feasible, namely, to construct an entirely new canal from Chatterley to Harecastle, 2 miles 5 chains in length, on a route to the west of the present tunnels. The greater part of this would be an open cutting, but there would be a short tunnel of 370 yards at the northern end. This tunnel would have a towing path on either side for up and down traffic. This they regard as the most practical solution of the difficulty. The scheme also provides for reducing the 43 locks now existing between Weston Point and Stoke to 12 locks or lifts, so that the saving of time in passing through would be considerable. The engineers roughly estimate the cost of the 100-ton scheme, including preliminary expenses, at £1,143,000, in addition to which there would be the cost of acquiring the Weaver and the Trent and Mersey Canal should it be necessary to do so. Mr. Saner, in his supplementary report, urges that the influence of the committee should be brought to bear upon the Government to carry out the recommendations of the Royal Commission, so far as the appointment of a Waterways Board is concerned. This Board would then take control of the waterways forming what is known as the Cross, of which the Trent and Mersey Canal and the River Weaver form part. In the event of the Government refusing to carry out the recommendations of the Royal Commission or postponing the matter so long that there is practically no hope of their ever being carried out in time to save the interests of the inland towns, Mr. Saner suggests a local scheme.

He proposes an amalgamation of the Trent and Mersey Canal and the River Weaver, the carrying out of an improvement scheme, and the formation of a Trust, consisting of toll-payers, representatives of the Cheshire and Staffordshire County Councils, the Stoke-on-Trent Corporation, and the representatives of smaller towns on the route, with a capital of £2,200,000. Discussing this, he says the interest on the capital at $3\frac{1}{2}$ per cent., together with working expenses (say £50,000 a year), would amount to £127,000 annually, and would require a traffic of 2,540,000 tons a year at an average toll of 1s. per ton to meet it. There was already a traffic of 1,076,572 tons on the Weaver and 1,137,663 on the Canal, or a total of 2,214,235 tons, leaving 325,765 tons to be found. This difference, he maintained, could easily be made up. On the question of saving of labour, he pointed out that it would cost no more to convey 100 tons by the improved route than it did 29 tons now, and when two or more barges could be towed in train the cost would be somewhat less still. There would also be a saving in the cost of transhipment in those cases where double transhipment now takes place. Mr. Saner adds that surely success might be confidently looked for, even if the Government are not willing to take the matter up; and everyone who has the interests of the Potteries industries at heart will wish that his optimism may be justified. The scheme, it may be remarked, is but a small one compared with the original making of the Trent and Mersey Canal (then known as the Grand Trunk), which was largely carried out through the enterprise and enthusiasm of Josiah Wedgwood.

The question of water communication also came before the meeting of the local Chamber of Commerce on Jan. 15, in the form of correspondence with the North Staffordshire Railway Co. It will be remembered that some time ago it was reported that the Harecastle tunnels, which, of course, are a necessary part of the canal communication with the Mersey, were in a serious state of disrepair, owing to mining subsidence, and the proposal was mad to divert the canal so as to avoid the tunnels. The first letter, which was under date of Oct. 11, was from Mr. W. D. Phillipps, the general manager of the railway company, who stated that his directors had decided that it would not be opportune to go to Parliament next session for an Act to enable them to construct a diversion of their canal so as to avoid the Harecastle tunnels, as in view of the very influential committee appointed at a meeting of local authorities at Stoke on May 1, 1912, with regard to improving the waterway between the Mersey and the Potteries, his directors felt that a Parliamentary Committee would be very likely to throw out a Bill promoted by them at this juncture. They had, however, determined to put the tunnels in thoroughly good order. To this the Secretary of the Chamber replied on Oct. 21, stating that they did not consider the tunnels capable of proper repair, and pointing to the importance of the matter to the potting trade. In a further letter on Oct. 23, Mr. Phillipps stated that his directors, having appointed their general manager to represent them on the local waterways committee, and having allowed their canal engineer to be associated with Mr. Saner (Mersey-Weaver Navigation) as engineering experts, would be stultifying themselves

and treating the committee with great discourtesy if they were to go their own way and promote a Bill in Parliament which the committee would be bound to oppose if they accepted Mr. Saner's views. As it would probably take ten years to construct the proposed canal diversion at Harecastle (including the time necessarily occupied in getting an Act of Parliament, preparing working drawings and letting the contract), the existing "new" tunnel would have to undergo very heavy repairs in any case if it were to be kept open. They had, therefore, asked Mr. G. R. Jebb, of the Birmingham Canal, who had had more experience in repairing canals subject to mining subsidence than any man living, to advise them, and would do all that was humanly possible to prevent interruption of traffic.

The President of the Chamber (Mr. H. Boddington) expressed disappointment at the decision, and pointed out that the deputation from the Chamber which met the railway company in the autumn of 1911 supported the diversion on the grounds that it would be an improvement in navigation, that it would obviate the possibility of further trouble from mining operations, that it would remove any fear of the potting trade being interfered with through an interruption of traffic, and that it would form a basis for improving the waterways of the district. He was convinced that the scheme for diversion would be the best, and if a broader canal should be hereafter constructed, it would be a link in the chain. He added that the report of both the engineers appointed by the local waterways committee was in favour of the diversion scheme. A stoppage might occur at any time, which would be most serious to the district. Major Cecil Wedgwood observed that the possible holding up of potters' materials was a vital question. Mr. John Ridgway contested the statement that it would take ten years to cut the diversion. It was a terrible alternative that in the meantime they were to be satisfied with a canal which might at any moment strangle the district with a shortage of supplies. A resolution was then passed, regretting that "the North Staffordshire Railway Co. are not going on during the ensuing session of Parliament with their scheme of diversion of the canal at Harecastle, which the Chamber favours as against repairs of the tunnels, during the execution of which, it feels, the Potteries must suffer the gravest inconvenience in any stoppage of their supplies of materials," and also deciding to hold a special meeting to consider the matter when the report of the engineers to the local waterways committee was available. At the same meeting the Chamber considered the question of the Railways Bill, and decided that no good purpose would be served by opposing it in view of the Government's pledge to the railway companies.

The Potteries district is to be honoured by a visit from the King and Queen in April next, and their Majesties, who have already some acquaintance with the potting industry and who have already patronised local manufactures by giving a huge order for Coronation beakers, are expected to visit some of the local factories. The arrangements are not yet completed, but it is now known that it will be in connection with a visit to the Marquis and Marchioness of Crewe at Crewe Hall. It is believed that the tour will partake of a similar character to the Yorkshire visit of last year. The arrangements so far announced are that their Majesties will arrive at Crewe from London on April 21 and proceed direct to the great locomotive works of the London and North-Western Railway Co. on a tour of inspection. Afterwards they will drive through the principal streets of the borough. The visit to the Potteries and Newcastle-under-Lyme is expected to be on the next day, April 22. No details of the arrangements are yet known beyond the facts that their Majesties will not expect a formal reception or the offering of an address, though the local authorities and some of the principal residents will have the honour of being presented. The programme will, it is anticipated, also include inspections of local factories and a visit to the North Staffordshire Infirmary at Hartshill, where the King may formally open the extensions of that institution, particularly as the new Outpatients' Department has been erected as a memorial to the late King Edward.

Since the foregoing was written, the announcement has been made by the Mayor of Stoke-on-Trent (Alderman F. Geen) that the visit to North Staffordshire will extend over two days—April 22 and 23—and that the King and Queen are desirous of visiting each of the six towns of the Potteries, in order to become better acquainted with the district, the people, and the industries. The visit is to be one of "no ceremonies," and will be of a semi-private or informal character. So far as can now be ascertained, their Majesties will arrive at Newcastle on the morning of the 22nd and afterwards proceed to the North Staffordshire Infirmary. Then during the remainder of the day and part of the following they will devote themselves to an inspection of the local industries. Factories in several, at any rate, of the areas of the Stoke-on-Trent County Borough will be visited, and each of the towns will be passed through.

On one previous occasion their Majesties, then Duke and Duchess of York, have visited the Potteries. That event recalls the departed glories of Trentham Hall, now demolished, for they were then the guests of the Duke and Duchess of Sutherland. The house party included the Earl of Dartmouth (Lord Lieutenant of Staffordshire), the Countess of Zetland, Lady Rossmore, Lady Eva Dugdale, Lord Chelsea, and Sir Charles Cust. The visit was in July, 1900, and on Friday, the 27th of that month, the party, including the Duke and Duchess of Sutherland, drove to Stoke and made an inspection of the works of W. T. Copeland & Sons. They were conducted over the factory by Mr. R. P. Copeland, and were much interested in the various processes of pottery manufacture and in the firm's highly artistic products. On the following day their Royal Highnesses proceeded to Leek and opened the Technical Schools. The people of the Potteries are anticipating with much pleasure the honour of the forthcoming visit, and their Majesties are assured of a loyal and enthusiastic reception from all classes of the community.

Three of the knights and one of the baronets included in the New Year honours are associated with Staffordshire—Sir R. W. Essex, M.P., the representative in Parliament of Stafford Borough; Sir Francis Darwin, son of the great Charles Darwin, who was a grandson of Josiah Wedgwood; and Sir J. F. Bagot, Bart., a member of the well-known Staffordshire family of Bagot. The chief interest in the Potteries attaches to the knighthood conferred on Sir Corbet Woodall, who, in addition to being an eminent gas engineer, is chairman of directors of James Macintyre & Co., Ltd., of the Washington Works, Burslem, having succeeded his late brother, Mr. Wm. Woodall, M.P., in that position. The news of the honour was received at Washington Works with great jubilation, and in celebration the workpeople were given a holiday at the firm's expense. Previous to separating for the day, however, the employees held a meeting and decided to forward their congratulations to Sir Corbet, on the proposition of Mr. J. Gibson, who has been in the firm's employ for fifty years, seconded by Mr. J. H. Cresswell, an employee

who has seen thirty years' service. Mr. Henry Watkin, managing director, who presided over this happy gathering, said he felt that no one was more worthy of the honour bestowed than Sir Corbet, for he was not only one of the greatest authorities in the world on gas engineering, but he was also one of the pioneers in profit sharing schemes. He had organised one that embraced no fewer than 11,000 people. They were all gratified that a man of such character and ability should occupy the chairmanship of their own works, an observation which was received with cheers.

The directors of Booths, Ltd., Tunstall, entertained their officials to their ninth annual dinner at the North Stafford Hotel, Stoke, early in the month, when the happy relations existing between the firm and their staff were evidenced. The gathering was presided over by Mr. C. H. Bowers, the managing director, Mr. C. E. Green (chairman of directors), being also present. Various toasts were honoured, including that of "Booths, Ltd.," which was submitted by Alderman A. J. Price, who said that Tunstall was proud of the firm and the firm's products. In reply, Mr. C. E. Green spoke of the cordial relations existing between the firm and their employees, and reviewing the year, said they had had difficulties, but he was glad to say they had overcome them. The Mayor of Newcastle (Mr. W. Mellard) gave the health of the Chairman in felicitous terms, and Mr. Bowers, in reply, said he owed his success as managing director to the fine staff of men gathered round him, of whom he was justly proud. ——The members of the North Staffordshire Cratemakers' Association, an organisation formed to regulate selling prices, have held their second annual dinner during the month, the speeches on that occasion chiefly being of a mutually congratulatory character on the fact of the improved prices obtained during the year. Mr. W. Stevenson, in proposing the toast of the Association, said that twelve months ago cratemaking was as bad as it could be from a business point of view. They, however, formed their Association and brought the discount down to 20 per cent., which during his connection with the trade was unprecedented. The cratemakers outside the Association could now be counted on one hand, which spoke well for the good work the Association had accomplished. Other speakers expressed the hope that the discount would be still further reduced in the not distant future.

Widespread regret has been expressed at the sudden deaths of two Potteries manufacturers. Mr. Thomas Hughes was taken ill on Christmas Day, and despite an operation, died at his residence, Abbey House, Cobridge, on Dec. 29, from peritonitis. Mr. Hughes was only 55 years of age. He came of an old Burslem family of potters, and was the second son of the late Mr. Elijah Hughes. He was a member of the firm of Messrs. Taylor, Tunnicliffe & Co., of Hanley, and was widely known amongst those associated with the potting industry. His genial personality, unvarying courtesy and generous disposition endeared him to a wide circle of friends. Mr. Hughes was a pioneer of local amateur opera, for which the Potteries has nowadays a great reputation, having no fewer than three flourishing societies which present the classics of the Savoy and other light opera with a success not far short of professional presentations. Mr. Hughes was one of the founders, nearly twenty years ago, of the Burslem (now Stoke-on-Trent) Amateur Operatic Society, and gained a great reputation by his interpretations of the Judge in "Trial by Jury," Gaspard in "Les Cloches de Corneville," John Wellington Wells in "The Sorcerer," &c. The deceased gentleman leaves a widow and five children, the eldest of whom, Mr. T. H. Hughes, is Lecturer on Architecture in the Aberdeen School of Arts and Crafts. ——At the very early age of 39 years, the death took place on Jan. 11 of Mr. Frederick James Radford, Westholme, Lightwood, Longton. An obituary notice appears elsewhere in this issue.

The death occurred on Jan. 7 of Mr. William Hassell, of Tunstall. He was 52 years of age and was a potters' dipper by trade, having been employed by W. H. Grindley & Co. for six or seven years, and, having worked as a dipper for thirty years. Mr. Hassell was well known and much respected in Tunstall, having been for eleven years a member of the old Tunstall Urban District Council. For thirty-three years he had been a member of the Sons of Temperance Society, and had occupied the position of Grand Scribe for ten years. At the time of his death he was a member of the Stoke-on-Trent Insurance Committee. He was a prominent Primitive Methodist, and was last year vice-president of the Tunstall P.S.A. Brotherhood. At the coroner's inquiry held relative to his death, Dr. A. A. Hill (factory certifying surgeon) described him as one of the best dippers from the health point of view he had ever examined, and the week before his death deceased told him he had never felt better in his life. The evidence of the widow was that he was taken ill on Jan. 4, and became unconscious on the 6th, death taking place the next day. Dr. Carter, who had made a post-mortem examination, said death was due to uræmic coma, brought about by acute nephritis, to which his employment was a contributory cause. A verdict was returned accordingly.—— William Varcoe & Sons, Ltd., Stoke-on-Trent, inform us that Mr. A. P. Morse, who has been managing their mines in Cornwall, is now representing them in the Potteries.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

STOCKTAKING and balancing accounts have been occupying the attention of the wholesale houses and most of the manufacturers since the incoming of the new year. Some have already carried this operation through, but there are a good many still in the throes of the annual analysis at the date of writing. In the casting up of results there is everywhere the black mark of the coal-miners' strike and its consequences, when in most of the wholesale houses, over a period of five or six weeks, there was a condition of paralysis. Business places might better have been shut up altogether, for they were all open and the costs and wages running up, while no trade to speak of was being carried through. It was a disastrously wasting period; but fortunately it did not last long enough to inflict irreparable injury, and, so far the whole year, even in the case of those houses that were hardest hit, there has been a return at least up to the living mark, with perhaps some little consideration over that.

On the part of the wholesale merchants the new year begins hopefully Within the past week or ten days the despatching of travellers over the country for early spring orders has commenced, and although it is too soon yet to pronounce as to the pulse of the market over the country at large, there has at least been some little encouragement in the way of orders actually booked. The experience of the closing days of January and of the first half of February will suffice to indicate the tendencies in something like a decisive way, and there is a fair show of hope that the outcome will prove to be of a satisfactory character.

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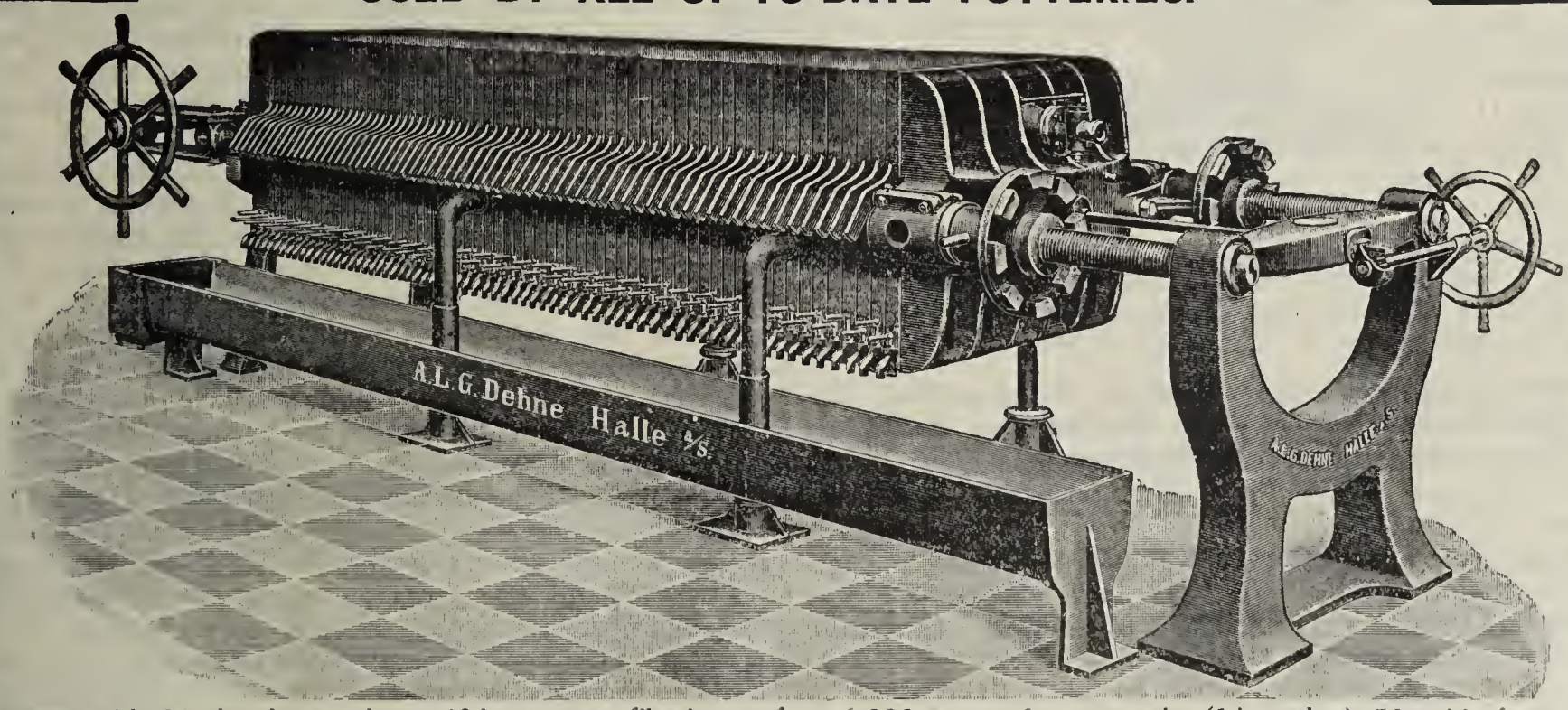
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There is one circumstance that should aid the placing of orders in these trades around the coasts of the country and throughout the islands. We refer to the extraordinary bountifulness of the winter takes of herrings during the course of January.

The retail merchants in the pottery and glass trades, after the passing of Christmas and New Year's Day, with accompanying extensions of the festive season, have to report only a very moderate outcome in the way of extra sales for the occasion. The weather has had much to do with this, for it has continued very bad indeed, with incessant change and endless uncertainty. Had it been otherwise, sales would no doubt have shown some improvement over the outcome of preceding festive seasons of annual occurrence, for, as regards industries generally, 1912 has been in Scotland a year of recovered health and activity, with wages-money in strong circulation, and checked only now and again by strikes. This general industrial health, experienced during 1912, is all but certain to be continued, and possibly to be enhanced, during 1913, and surely the effect of the same will be felt by the pottery and glass trades to some purpose before the new year gets much older.

Market figures have undergone no further change in any of the lines, and the rises that took place during the second half of 1912 seem all to have been accepted as unavoidable, along the whole course of the market—consumers, retail dealers, and wholesale merchants. The rises in glass goods have been even more easily held than in some of the other lines, and the difficulty here has been to get delivery within a reasonable margin of time—a difficulty much in evidence through the whole of the Christmas and New Year's Day celebrations. With regard to pottery goods generally, although there is no further stated rise, there is in the air the whisper of further rises not far off, and something like a conviction that action of that kind on the part of the makers is really not far off, if not actually at hand.

The Gazette.

Dissolutions of Partnership.

NOTE.—*When two dates are given in the following announcements the first is the date of the diesolution. The date in parentheses that of the official advertisement.*

EMANUEL MAX & Co. (Max Emanuel and Albt. Pappenheimer), 41 and 42, Shoe-lane, Holborn-circus, E.C., china and fancy goods importers, manufacturers and agents. Dec. 21. Debts by A. Pappenheimer, who continues. (Dec. 27.)

SHRIGLEY & HUNT (Arthur Wm. Hunt and Arthur Edwd. Hunt), John o' Gaunt's Gate, Lancaster, and 28, John-st., Bedford-row, London, W.C., stained glass window manufacturers. Dec. 31. Debts by A. W. Hunt. (Jan. 24.)

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

BILTONS, LTD. Claims to C. E. Bullock, 17, Albion-st., Hanley, liqr.

FURNIVALS, LTD. Resolved Jan. 9:—That the company be wound up. R. E. Clark, 17, Albion-st., Hanley, liqr.

METAL FINISHERS (1910), LTD., London, N.—L. Adams ceased to act as receiver, Dec. 20.

TILEHURST POTTERIES, LTD. (formerly F. Wheeler & Co.. Ltd.), Tilehurst.—F. R. Roberts, of the Aylesford Pottery Co., Ltd. (no address given), appointed receiver, Nov. 9, 1911.

WAVERLEY POTTERY CO., LTD., Longton.—D. H. Bates ceased to act as receiver, Dec. 15.

Notices of Dividends.

GODWIN AUSTIN F. (separate estate), Goode Reste, Lugwardine, encaustic tile manufacturer. First, 10s., at T. W. Meats', 39, Broad-st., Hereford.

GODWIN & SON, Lugwardine Works, Withington, encaustic tile manufacturers. First, 15s., at T. W. Meats', 3, Broad-st., Hereford.

WOODFIELD EDWD., The Pottery, Harborough-rd., Kibworth Beauchamp, flower and chimney pot manufacturer. First and final, 2s. 5½d., at O.R.'s, Leicester.

Notice under Assignment, &c.

SANDLAND WILLIAM, 3, Frogmore-rd., Market Drayton, and Lichfield Pottery, Hanley, earthenware manufacturer. Claims to P. J. McKnight, 32, Stafford-st., Hanley, sol., for and on behalf of John Williams, Oakley, Watlands-avenue, Wolstanton.

Notice of Release of Trustee.

WYBROW EDWARD, 127, Landor-rd., and 6, Voltaire-rd., Clapham, glass and china dealer. Trustee, O. Sunderland, 15, Eastcheap, London. E.C.

Application for Debtor's Discharge.

GIBSON ANDREW, Ropley, Bowes-rd., New Southgate, glass merchant. At C.C., Upper Edmonton, March 3 at 10 a.m.

Notice.

CLOCHE CO. and FRENCH CLOCHE CO., Caxton-house, Westminster. Chas. David McKay has sold all his interest in the business lately carried on by him to Cordelia Virginia Allender, of 2, Wellington-mansions, Buckingham-gate, and all debts due to the said business will, as from Nov. 25, be collected and received by the said C. V. Allender, and all debts of the said business will, as from the same date, be paid and discharged by the said C. V. Allender. (Dec. 24.)

Private Meeting.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

WILLMONT HENRY MARKE, 16 and 26, Payne-avenue, Hove, Sussex, china dealer, &c. The creditors interested herein were called together last month at the offices of Oscar Berry & Co., C.A., Brighton, when a statement of affairs was presented showing the position as at Dec. 9 last. This disclosed liabilities of £325, while the assets, after allowing £39 12s. for preferential claims, were expected to produce £79 3s. 11d., or a deficiency of £245 16s. 1d. The assets were as follows:—Stock-in-trade at valuation, £83 4s. 4d.; loose fittings and utensils, £2 18s. 6d.; book debts £33 2s. 7d., estimated to realise £7 10s.; furniture, £15; and cash in hand, £10 2s. 1d. There was a footnote to the statement to the effect that the fixtures at 16 Payne-avenue had not been valued, while those at 26, Payne-avenue were claimed by the landlord. It was reported that the debtor took over the business at 16, Payne-avenue, Hove, about 18 months ago, giving £100 for the goodwill, fixtures, and utensils, and taking the stock (£130) at valuation. The business was said to be doing £45 a week, but the debtor had not turned over that amount. The debtor had a capital of about £100 of his own money, and borrowed £130 from his brother, which he had since repaid. In April last the debtor's brother bought the property at 26, Payne-avenue, and the debtor agreed to take it on a weekly tenancy at 12s. a week. That concern had been a failure, and the debtor owed his brother £24 for rent. The debtor's life was insured under an industrial policy, which had no surrender value. The deficiency was accounted for by loss on trading. It was decided to appoint a committee of inspection, consisting of the three largest trade creditors, to negotiate with the debtor's friends with a view to the sale of the whole estate.

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Oscar Berry & Co. have since issued a circular informing the creditors that they have arranged for an offer to be made of a composition of 7s. 6d. in the £, free of expenses the money to be deposited with them in two instalments, the second being due on the 10th inst. The creditors are recommended to accept the offer by the accountants, who point out that it is necessary that all should agree at once.

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

* *These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

(*The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.*—Eds. P.G.)

Dale Rose, Whieldon-rd., and Chas. Key, of Blurton-rd., trading at Duke-st., all Fenton, potters, as the Unique Art Pottery Co. Assignment of partnership estate upon trust, &c. Dated, Jan. 14. Filed, Jan. 20. Liabilities unsecured, £681. Property, after deducting secured claims, £473. Tr., R. E. Clark, Hanley. Secured creditors, £9. The following are creditors :—Corner & Co., London, £17 ; B. Reece & Co., London, £55 ; Lucas & Sons, Burslem, £12 ; J. H. Edwards, Hanley, £24 ; H. J. Cyples, Longton, £17 ; Mossfield Colliery, Longton, £132 ; Keeling & Walker, Stoke-on-Trent, £18 ; Warrington & Son, Stoke-on-Trent, £11 ; rent, £45 ; bankers' claims, £285.

Frankland Jno. Wm., 32, Great George-st. and 131, Hyde Park-rd., Leeds, tile merchant. Dated, Jan. 16. Filed, Jan. 20. Liabilities unsecured, £587. Property, after deducting secured claims, £325. Tr., T. Coombs, King-st., Leeds. Secured creditors, £1,100. The following are creditors :—Gibbons, Hinton & Co., Brierley Hill, £28 ; Malkin Tile Co., Burslem, £33 ; Pilkington Tile Co., Clifton, £38 ; Long Meg Plaster Co., Lazonby, £24 ; G. Pennington, Leeds, £19 ; B. Wood, Leeds, £11 ; Leeds Fireclay Co., Leeds, £13 ; J. Pickersgill, Leeds, £832 ; Marsden Tiles, Ltd., Marsden, £33 ; Stanley Bros., Nuneaton, £11 ; J. C. Edwards, Ruabon, £20 ; Hodkin & Jones, Sheffield, £25 ; Lea & Boulton, Tunstall, £51 ; Hopton Wood Stone Co., Wirksworth, £10 ; banker's claim, £450.

Welch Alf., 192, High-st., 97, Winchcombe-st., and The Bungalow, Portland-st., all Cheltenham, pottery, &c., dealer. Composition of 10s. in the £, payable by four equal instalments, at 3, 6, 9 and 12 months from Nov. 22, 1912 ; secured by an assignment upon trust until default, &c. Dated, Jan. 30. Filed, Jan. 6. Liabilities unsecured, £2,214. Property, after deducting secured claims, £1,065. Tr., G. E. Corfield, Balfour House, Finsbury-pavement, E.C. The following are creditors :—G. L. Allen, London, £12 ; C. Bevan, London, £33 ; Cluse, Ltd., London, £10 ; M. Freeman, London, £59 ; Faudels, Ltd., London, £47 ; Grohmann & Co., London, £22 ; Hendeles & Co., London, £16 ; M. D. Jacobs, London, £55 ; Lazarus & Rosenfeld, London, £35 ; J. Lowe, London, £19 ; Laurie & Co., London, £10 ; H. & A. Lazarus, London, £18 ; Jonas Lang & Co., London, £19 ; Landeker & Brown, Ltd., London, £25 ; — Lee, London, £40 ; B. Muller & Son, London, £272 ; W. O'Neill, London, £50 ; Restall, Brown & Clennell, London, £78 ; F. Windsor, London, £12 ; Louis Wolff & Co., Ltd., London, £12 ; Bernstein Bros., Birmingham, £12 ; Ellis & Co., Birmingham, £17 ; Fletcher Hardware Co., Ltd., Birmingham, £26 ; A. Marston, Birmingham, £22 ; Newton & Minchen Pearson Page, Ltd., Birmingham, £25 ; Nathan Bros., Birmingham, £18 ; W. Thompson, Birmingham, £10 ; — Yarwood, Birmingham, £19 ; J. Woodall, Dudley, £15 ; Dewes & Copestake, Longton, £10 ; J. Gough & Co., Manchester, £17 ; Edie & Co., Newport, near Dundee, £31 ; A. Bloch, Paris, £29 ; Harrison & Fisher, Sheffield, £10 ; F. Mills & Co., Sheffield, £20 ; Empire Porcelain Co., Stoke-on-Trent, £12 ; Wiltsham & Robinson, Stoke-on-Trent, £24 ; L. S. Hingley & Son, Stourbridge, £22 ; Easton & Broadbent, Wolverhampton, £27. Cash creditors : Mrs. Barker, Cheltenham, £55 ; H. F. Midwinter (c/o, &c.), Cheltenham, £61 ; J. Bradbury, Cheltenham, £30 ; banker's claim, £595. Preferential creditors, £70.

Notice of Intended Dividend.

Rhodes Harry E., Blenheim-house, Worcester-rd., Malvern Link, china dealer. Claims Feb. 5 to A. S. Cully, Worcester, O.R.

Bankruptcy Proceedings.

Rhodes Harry Ernest, Blenheim House, Worcester-rd., Malvern Link, Worcester, china dealer. This debtor attended at the Guildhall, Worcester, on Jan. 14, for his public examination on accounts showing unsecured liabilities £114 and a deficiency of £92. Debtor attributed his failure to want of capital, bad trade, and illness of wife. In examination by the Assistant Official Receiver (Mr. Clement Hoult) debtor said he was formerly in business at Hog Mills, Birmingham, but while his wife was ill a canal burst and flooded his house, and he had to leave the premises and the business. He admitted that at Malvern he had never made sufficient profit to cover living expenses, and he had gradually got behind. He was enabled to start at Malvern by a gift of stock from a brother. Except for £12 10s. borrowed from friends all his liabilities were for trade debts. His wife now claimed most of the furniture, saying that it had been given to her by members of her own family. The examination was closed. The following are creditors herein :—Cartwright & Edwards, Ltd., Longton, £12 ; M. E. Rhodes, King's Norton, £16 ; Wagstaff & Brunt, Longton, £12.

Williams John Robert, The Stores, Penrhyn Bay, Llandudno, Carnarvon, china dealer, &c. This debtor attended at the Magistrates' Room, Bangor, on Jan. 9, for his public examination, when he stated that a great number of creditors in his business were accounted for by the fact that he had to deal with a large number of different firms. He could not account for the large depreciation of his stock, and thought that the business had never paid. The Assistant Official Receiver said the debtor had kept clean, honest books, the only fault being that they had not gone far enough. The examination was closed.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patents.

Ball or Pulverising Mills, No. 29,313.—E. Johnson and W. Boulton, Ltd. Ball or pulverising mills employed in the grinding of potters' and other materials. Dec. 20, 1912.

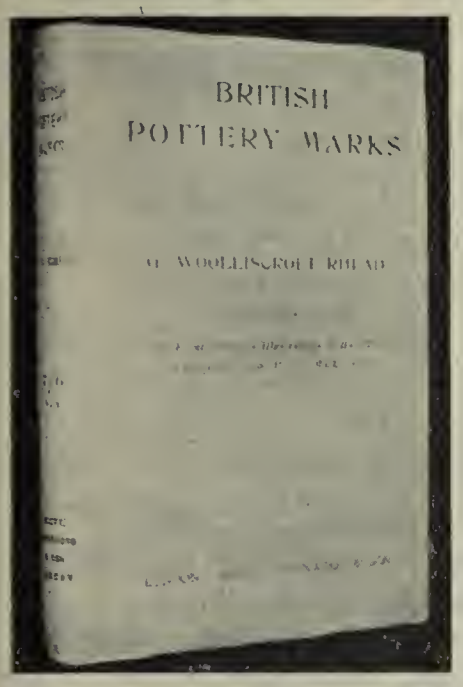
Drying Clay, No. 104.—A. W. Borlase and E. Borlase. Drying elay. Jan. 2, 1913.

Gauging or Measuring Tiles, No. 28,554.—J. Ward, A. H. Meir, and W. A. A. Quinton. Machines or apparatus for gauging or measuring tiles. Dec. 11, 1912.

Glass Bottle and Jar-making Machine, No. 28,664.—Continental Glass Machine Syndicate, Ltd., and J. P. Bush. Construction of glass bottle and jar-making machine. Dec. 12, 1912.

Glass Drawing Instruments, No. 628.—W. A. Jones. Glass drawing instruments. Jan. 8, 1913.

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Art Chronicle, September 10, 1910.

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HEATING FURNACE FOR GLASS, No. 525.—H. H. Pitt. Heating furnace or glory holes for glass manufacturers. Jan. 8, 1913.

MAKING HOLLOW GLASS ARTICLES, No. 2,925.—Treu hand-Vereinigung Akt.-Ges. Machine for making hollow glass articles. (Con. date Nov. 25, 1912, Germany.) Dec. 19, 1912.

PUG AND WAD MILLS FOR POTTERS. No. 29,766.—T. Arrowsmith and H. T. Arrowsmith. Pug and wad mills employed for making forms, lengths, saddles, pins and the like for potters' use. Dec. 27, 1912.

TILE, No. 618.—F. Haag. Tile. Jan. 8, 1913.

TILTABLE JUGS, No. 29,200. M. Eichler. Tiltable jugs and the like. Dec. 19, 1912.

TUMBLERS OR GLASSES, No. 28,536.—A. T. Munro. Tumblers or glasses and other vessels. Dec. 11, 1912.

Specifications Published.

1911.

26,009.—Kitto. Pie dish.

26,222 and 26,224.—Kadow. Manufacture of blown glass articles.

28,596.—Murer. Machines for moulding plastic sub stances.

23,900.—Gibbs. Decoration of glass and glassware.

27,892.—Rottenburg. Dish or receptacle for meat and the like.

28,882.—Hannock. Apparatus for internally shaping articles of pottery.

18,303.—Wolf. Automatic glass bottle-blowing machine.

28,521.—Pick. Manufacture of glass threads, felted glass or the like.

1912.

7,624.—Kellow. Slab walls.

521.—Quick. Plastic composition.

7,978.—Burgass. Method of operating ceramic furnaces and the like.

20,051.—Wolf. Automatic glass bottle-blowing machines.

15,007.—Esselborn. Roofing tiles.

18,517.—Grueby. Floor tiles.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

610,321.—R. T. Grocott, Whitehall Works, Longport.

610,572.—Witting Bros., Ltd., 49, Cannon-st., E.C.

610,686-7.—The Art Pottery Co., Waterloo-st., Longton.

610,688.—S. Fielding & Co., Ltd., Stoke-on-Trent.

610,896-903 and 610,986.—Pilkington's Tile and Pottery Co., Ltd., Clifton, nr. Manchester.

611,060.—Western Counties Creameries, Ltd., Yeovil.

611,061-3.—Butlers, Ltd., Small Heath, Birmingham.

611,097-9.—Pilkington's Tile and Pottery Co., Ltd., Clifton, nr. Manchester.

611,101.—Grimwades, Ltd., Stoke-on-Trent.

609,582-4.—F. W. Cocking, 15, Hammerbrookstrasse, Hamburg. Address for service, c/o J. Hans, 345, St. John-st., E.C.

609,590.—Mrs. L. J. Barker, 27, Richmond-mansions, Earl's Court, S.W.

610,084.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.

610,704.—Senior & Co., 181, New King's-rd., S.W.

610,729.—T. H. Dellar, 130, Forth-st., Pollockshields, Glasgow, and A. W. Young, 41, Annette-st., Pollockshields, Glasgow.

610,742.—A. H. Nicholls, 33, Harewood-avenue, Marylebone, W.C.

610,790.—Hedley & Co. (Leytonstone), Ltd., 92, Harrow-rd., Leytonstone, N.E.

611,089-91.—Rheinische Glashutten, 46, Huttenstrasse, Koln-Ehrenfeld. Germany, Address for service, Carpmael & Co., 24, Southampton-buildings, W.C.

611,176.—W. K. L. Dickson, 4, Denman-st., W.

611,251.—S. Fielding & Co., Stoke-on-Trent.

611,252.—Grimwades, Ltd., Stoke-on-Trent.

611,100.—W. A. Bailey, Audrey House, Ely-place, E.C.

611,164.—J. Bourne & Son, Denby Pottery, nr. Derby.

611,277.—Maximum Light Window Glass Co., 28. Victoria-st., S.W.

611,308.—R. T. Grocott, Whitehall Works, Longport.

610,085.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.

611,165.—H. Peck & Co., Ltd., 747, Old Kent-rd., S.E.

611,249.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.

611,278.—F. Winkle & Co., Ltd., Stoke-on-Trent.

611,306-7.—Gibson & Sons, Ltd., Burslem.

611,309.—Feigl-Moravek & Co., Libochowitz. Austria. Address for service, c/o Ed. Flageollet & Co., 62-3, Basinghall-st., E.C.

611,357-9.—James Green & Nephew, Ltd., 107. Queen Victoria-st., E.C.

611,554.—G. Davidson & Co., Gateshead-on-Tyne.

611,744.—J. Wright & Eagle Range, Ltd., Essex Works, Thimble Mill-lane. Aston, Birmingham.

611,831.—The Art Pottery Co., Waterloo-st., Longton.

611,994.—Mrs. M. B. Smith, 18, Calais-gate, Myatt's Park, Camberwell, S.E.

610,503.—J. Bachelet. 5, Rue Aubriot, Paris, France, Address for service, c/o Browne & Co., 9, Warwick-court, Gray's Inn, E.C.

611,378.—Major A. C. Hamilton, 87, Cadogan-grdns., S.W.

611,539.—Soho Pottery, Ltd., Waterloo-rd., Cobridge.

611,555.—Billing & Co., Lancaster-rd, Enfield, N.

611,591.—W. E. McCalla, c/o G. Bacon & Co., Queen Anne's-chambers, Tothill-st., S.W.

611,698-99.—S. Reich & Co., 15, Clerkenwell-rd., E.C.

612,037-40, 611,826 and 611,828-9.—Pilkington's Tile and Pottery Co., Ltd., Clifton, nr. Manchester.

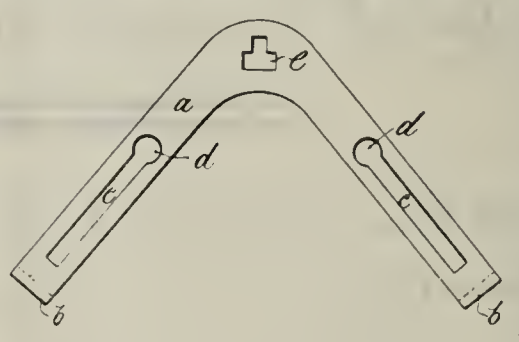
612,218, 612,051 and 612,054.—H. J. Heinz & Co., 99-101, Farringdon-rd., E.C.

612,272.—W. A. Bailey, Audrey House, Ely-place, E.C.

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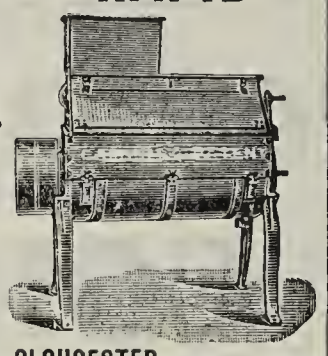
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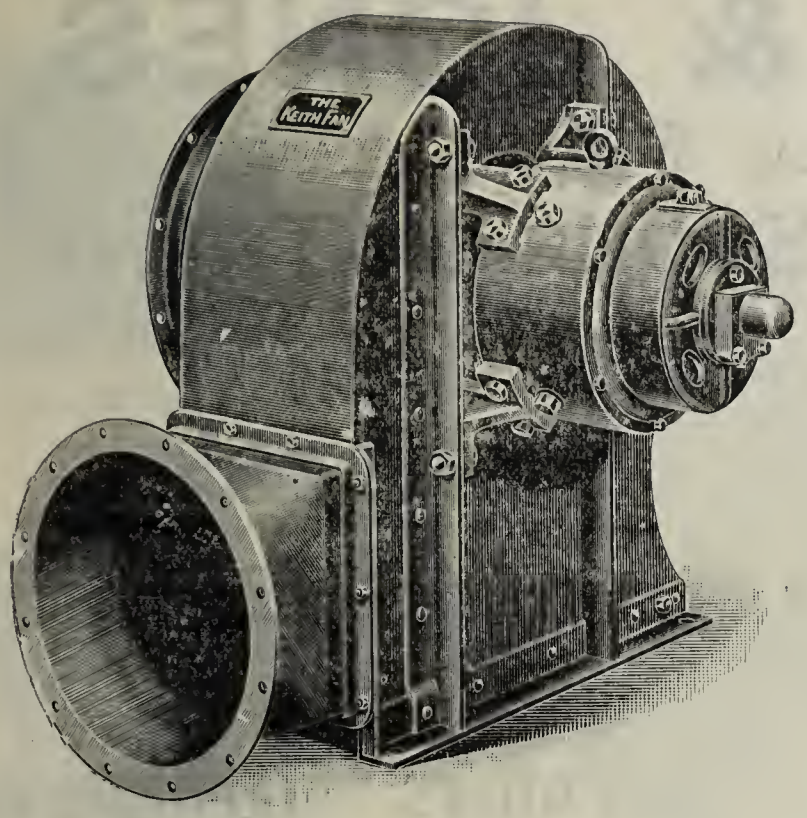
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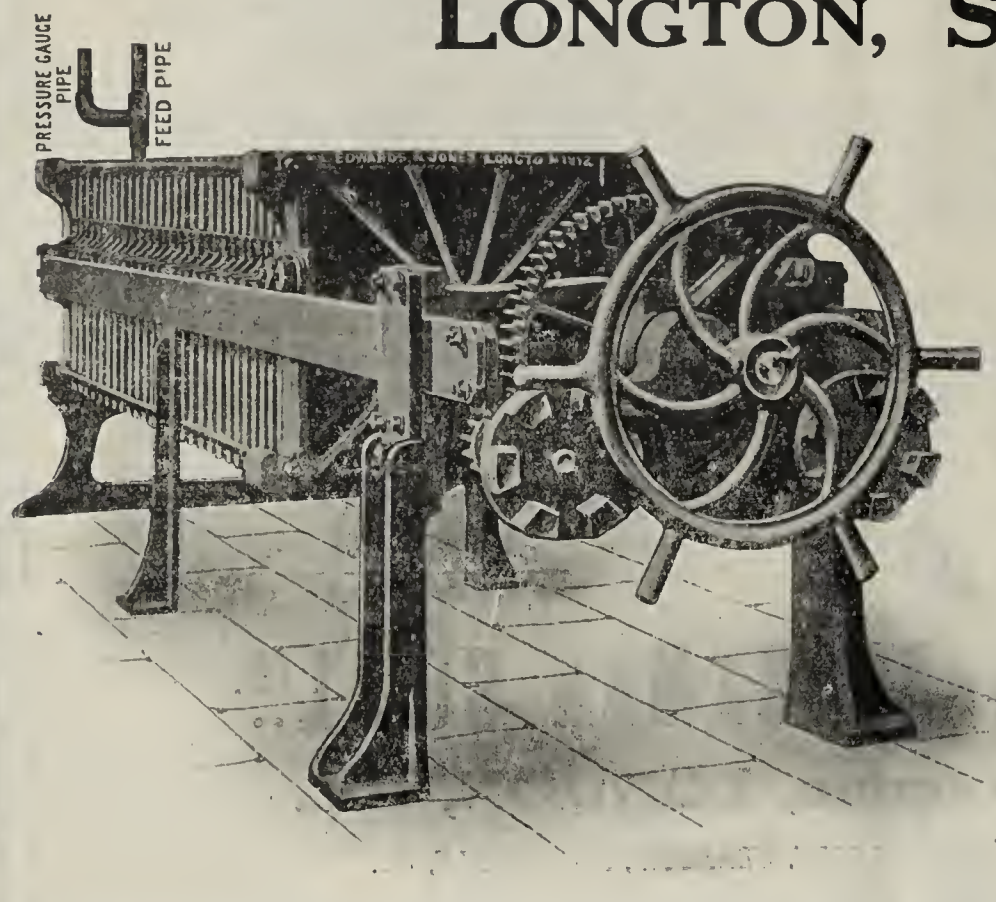
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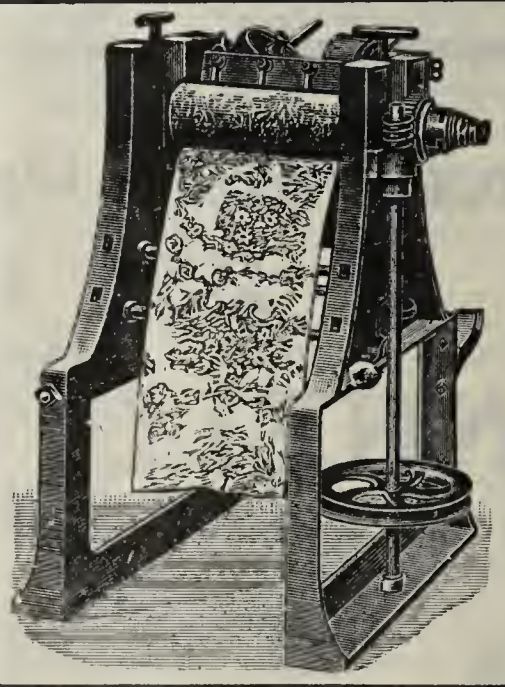
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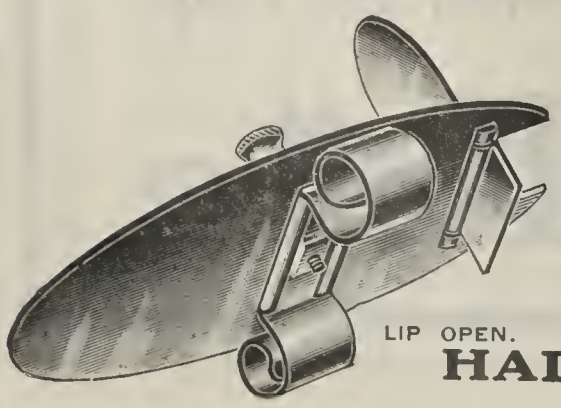
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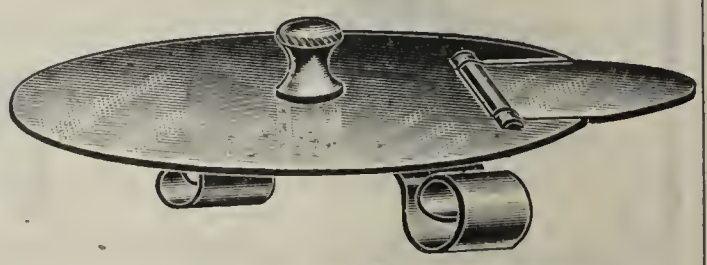
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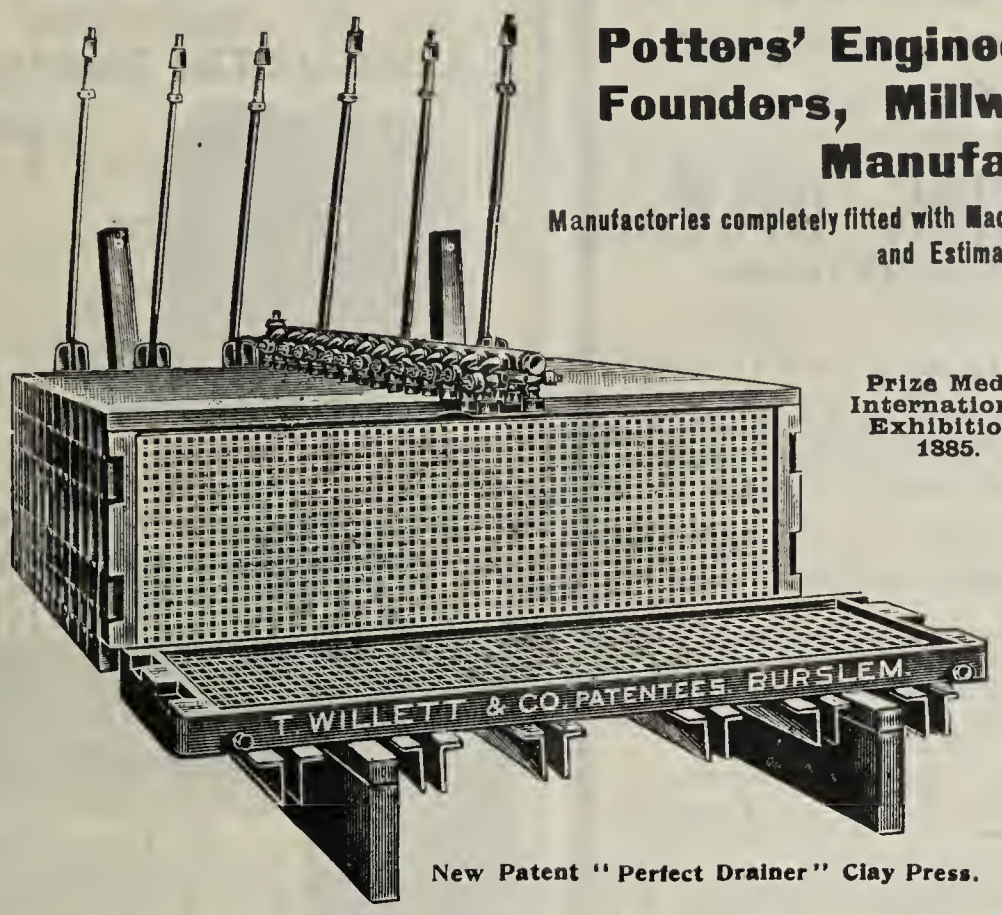
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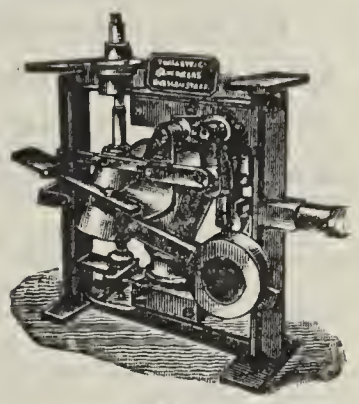


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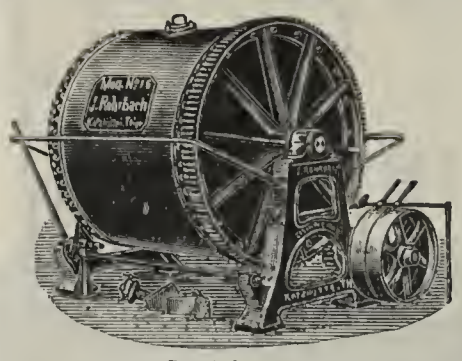
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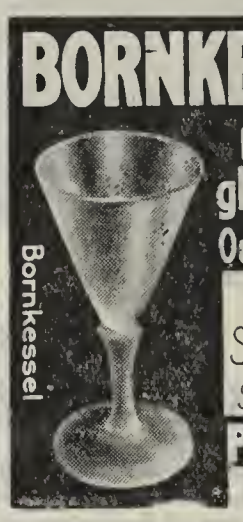
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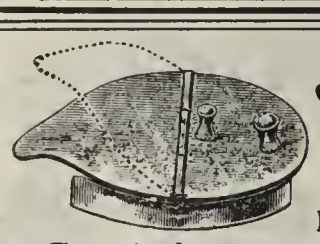


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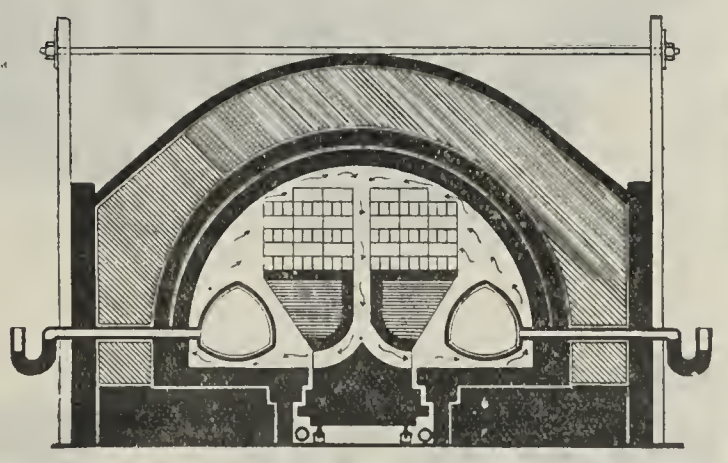
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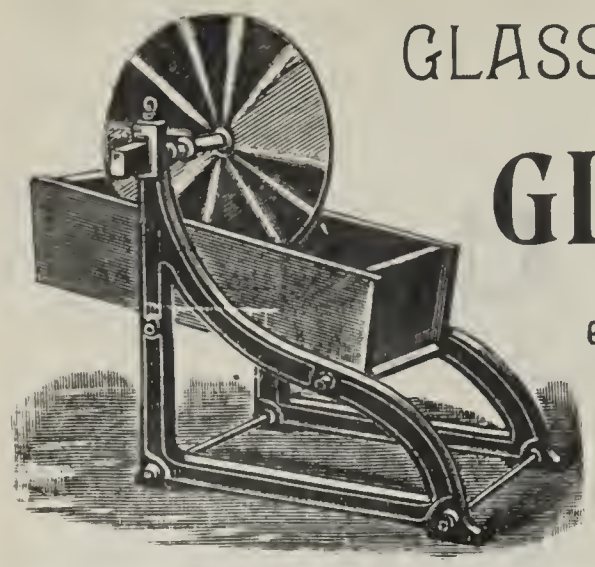
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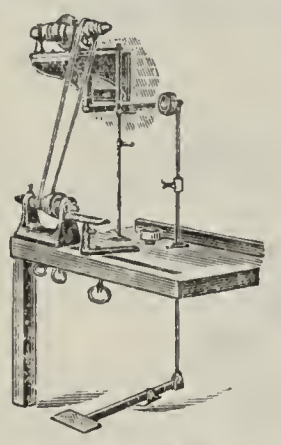
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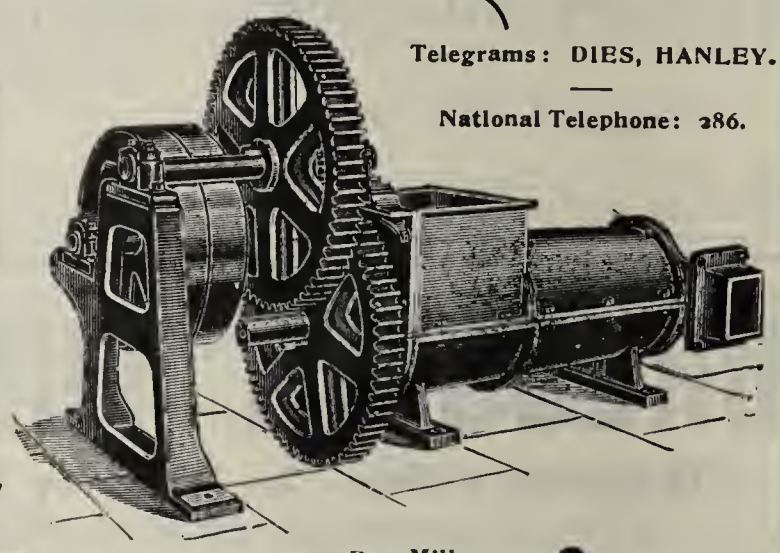


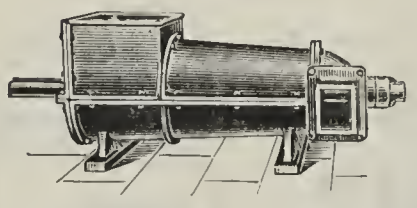
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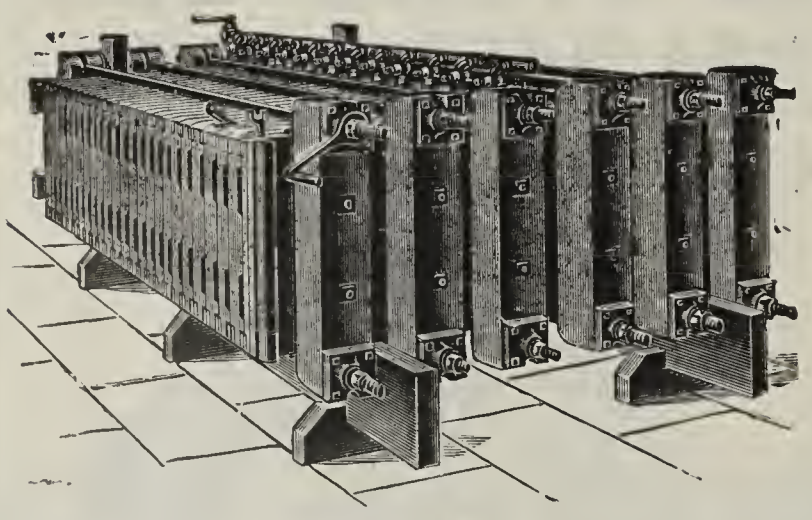
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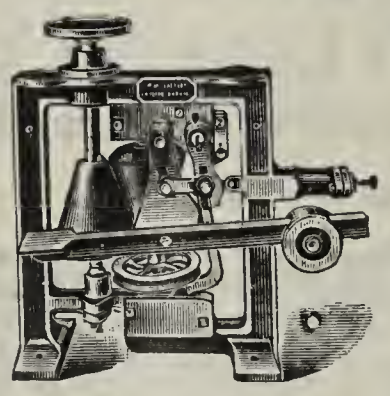




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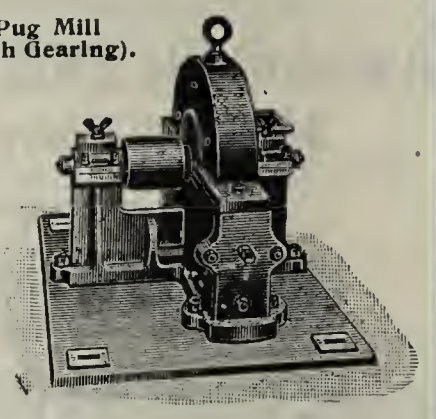


Filter Press.

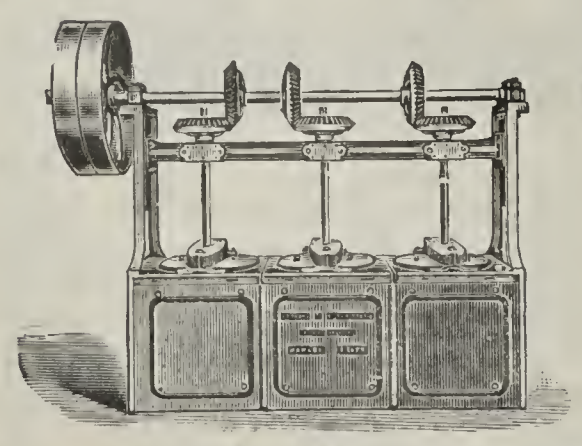


Throwing Wheel.

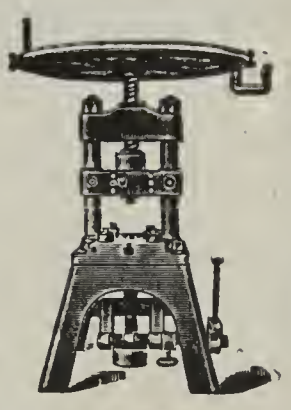
Pug Mill (with Gearing).



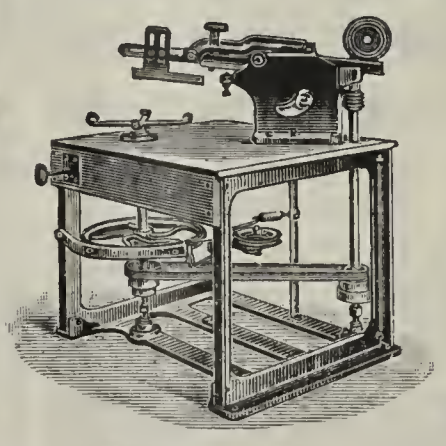
Damped Clay Disintegrator or Dust Mill.



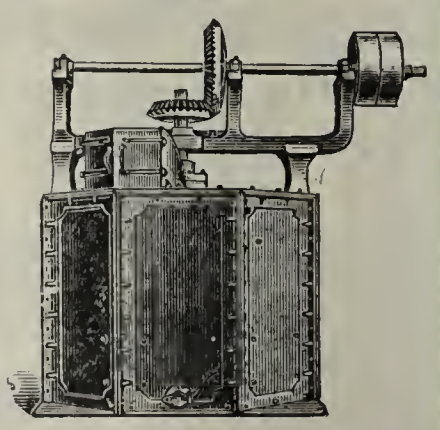
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All announcements for this Heading for April issue must reach us by first post on March 28th.

Special Trade Announcements.

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continued from page 230.

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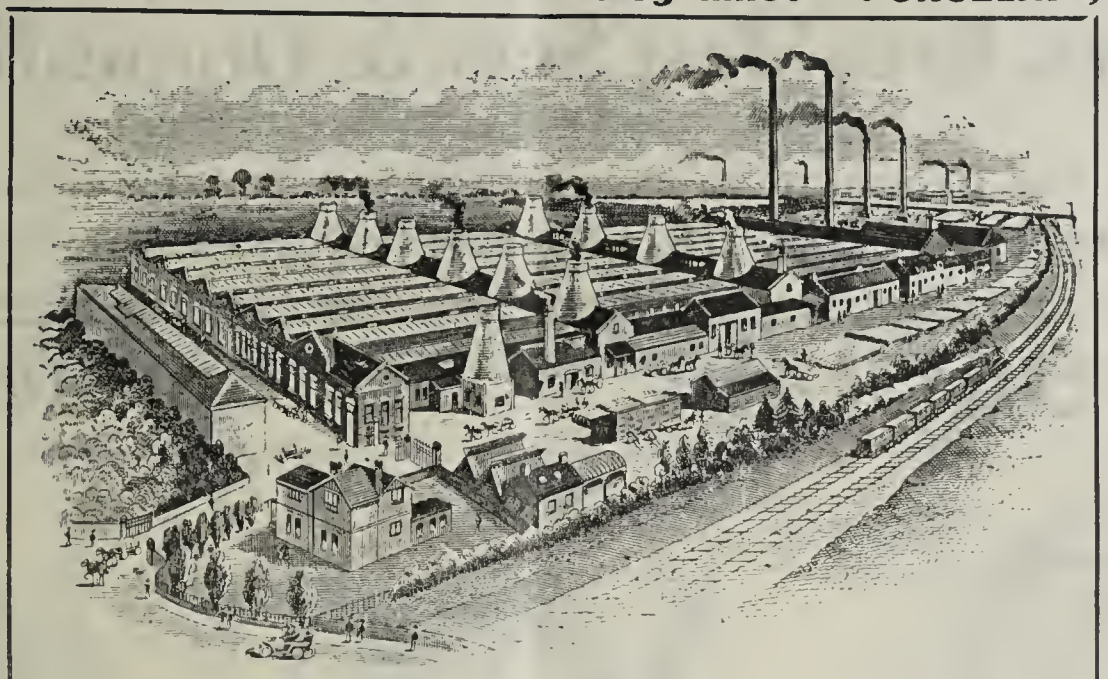
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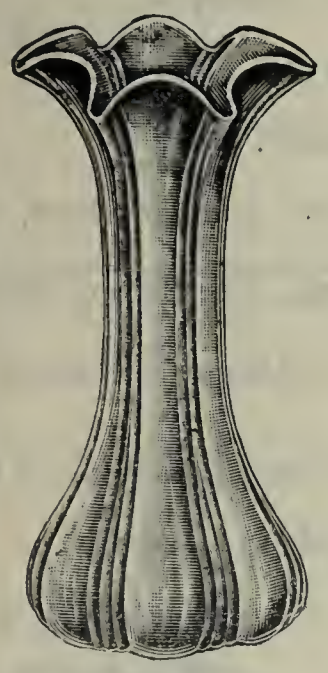


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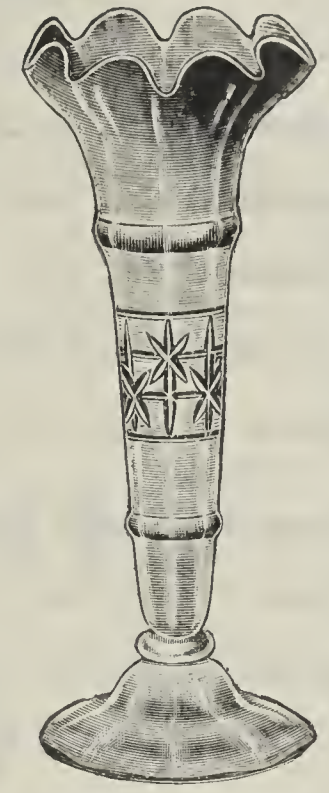
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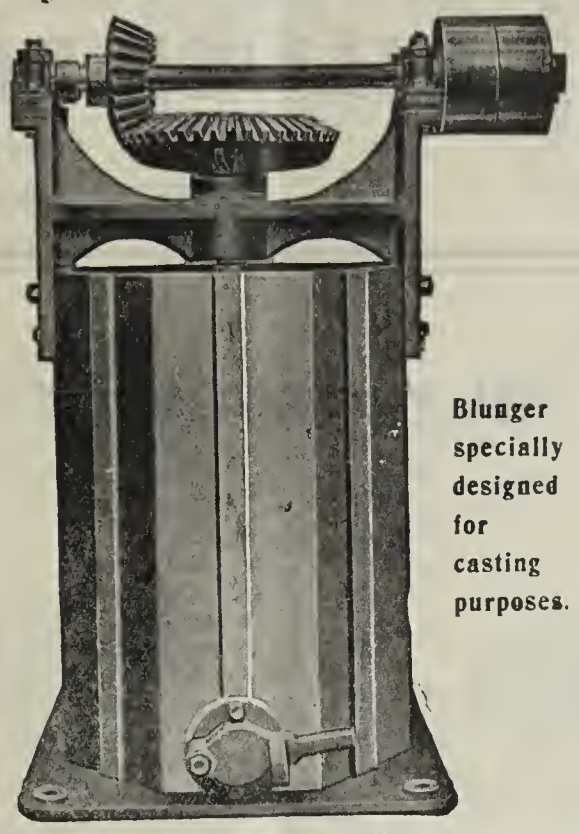
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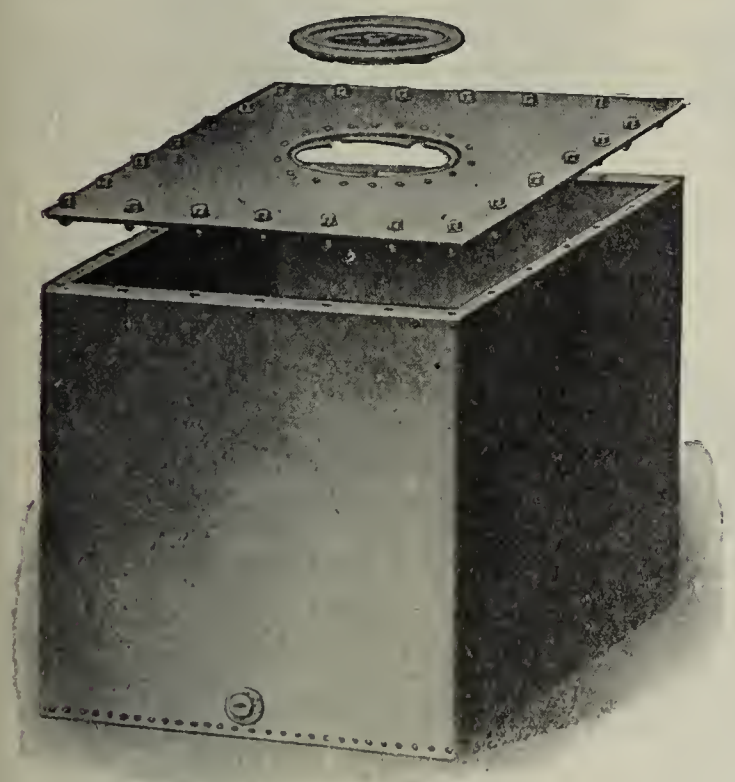
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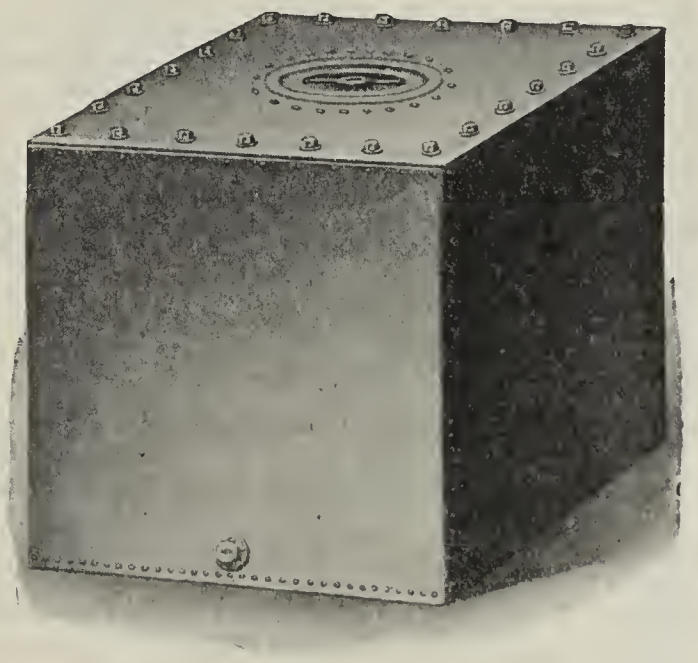
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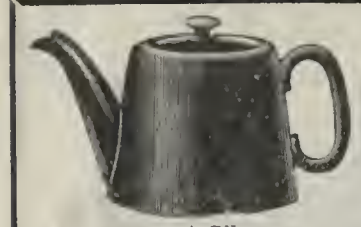
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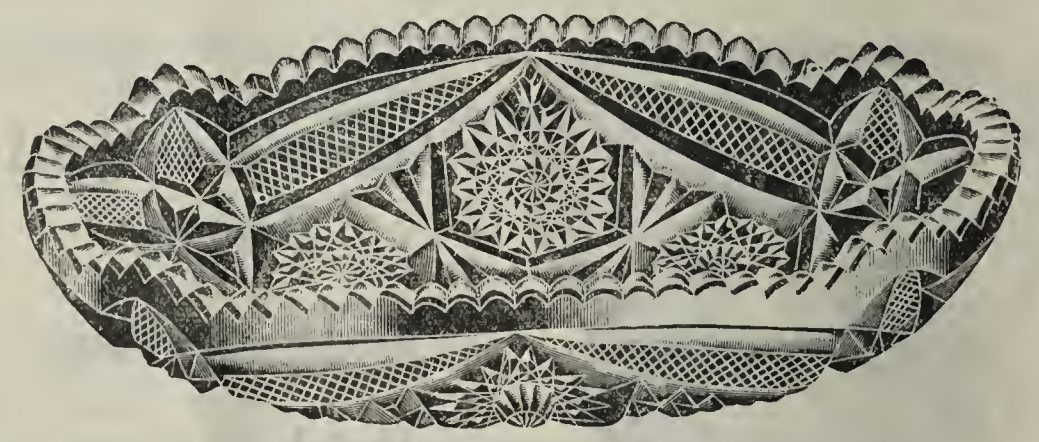
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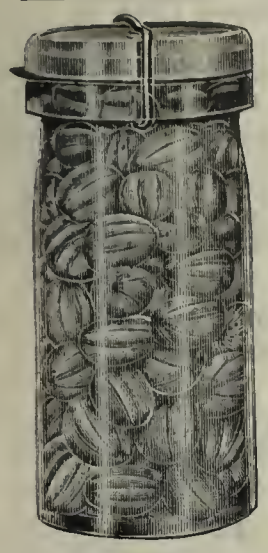
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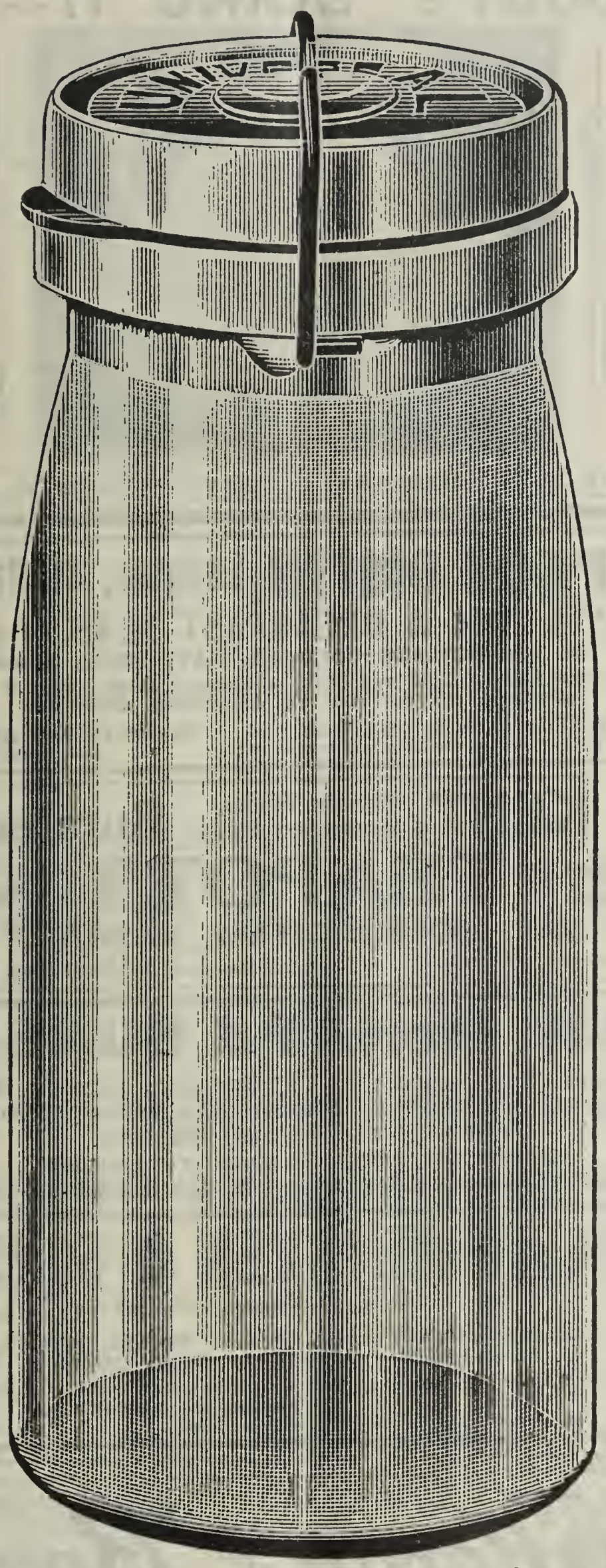


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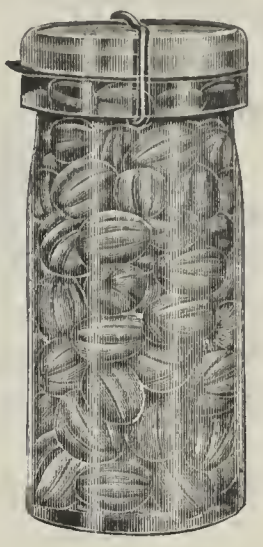
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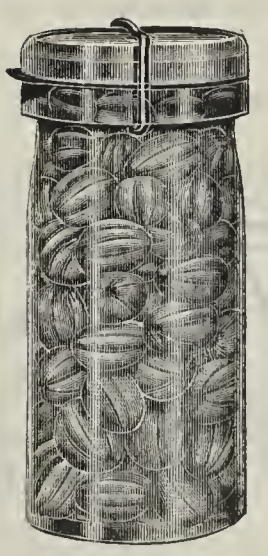


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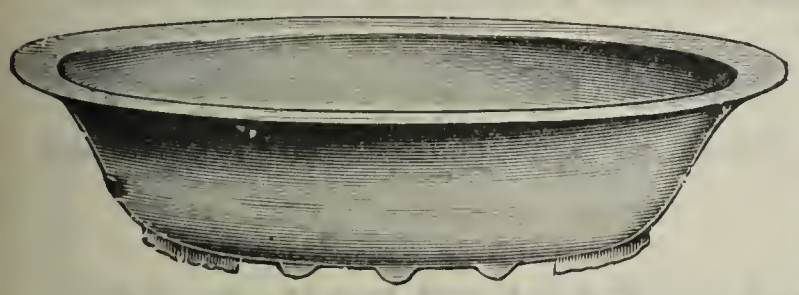
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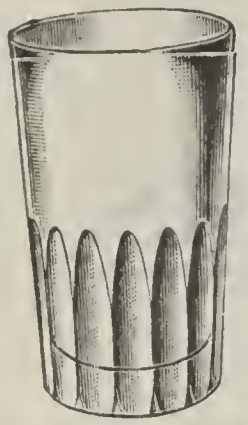


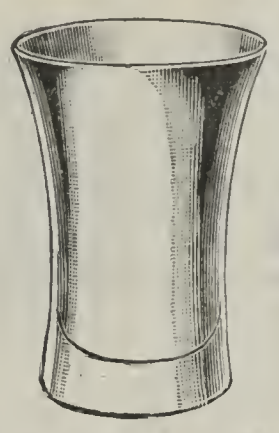
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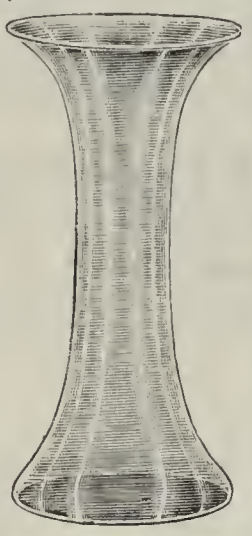
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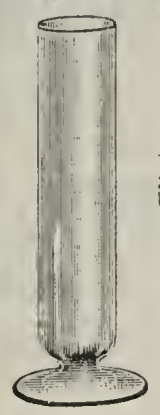
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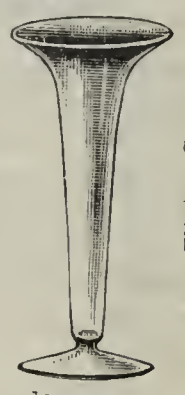
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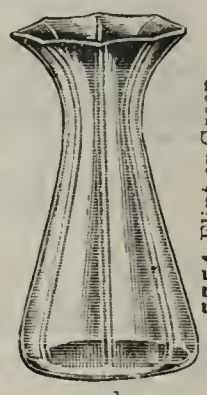
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4½in. 1/8
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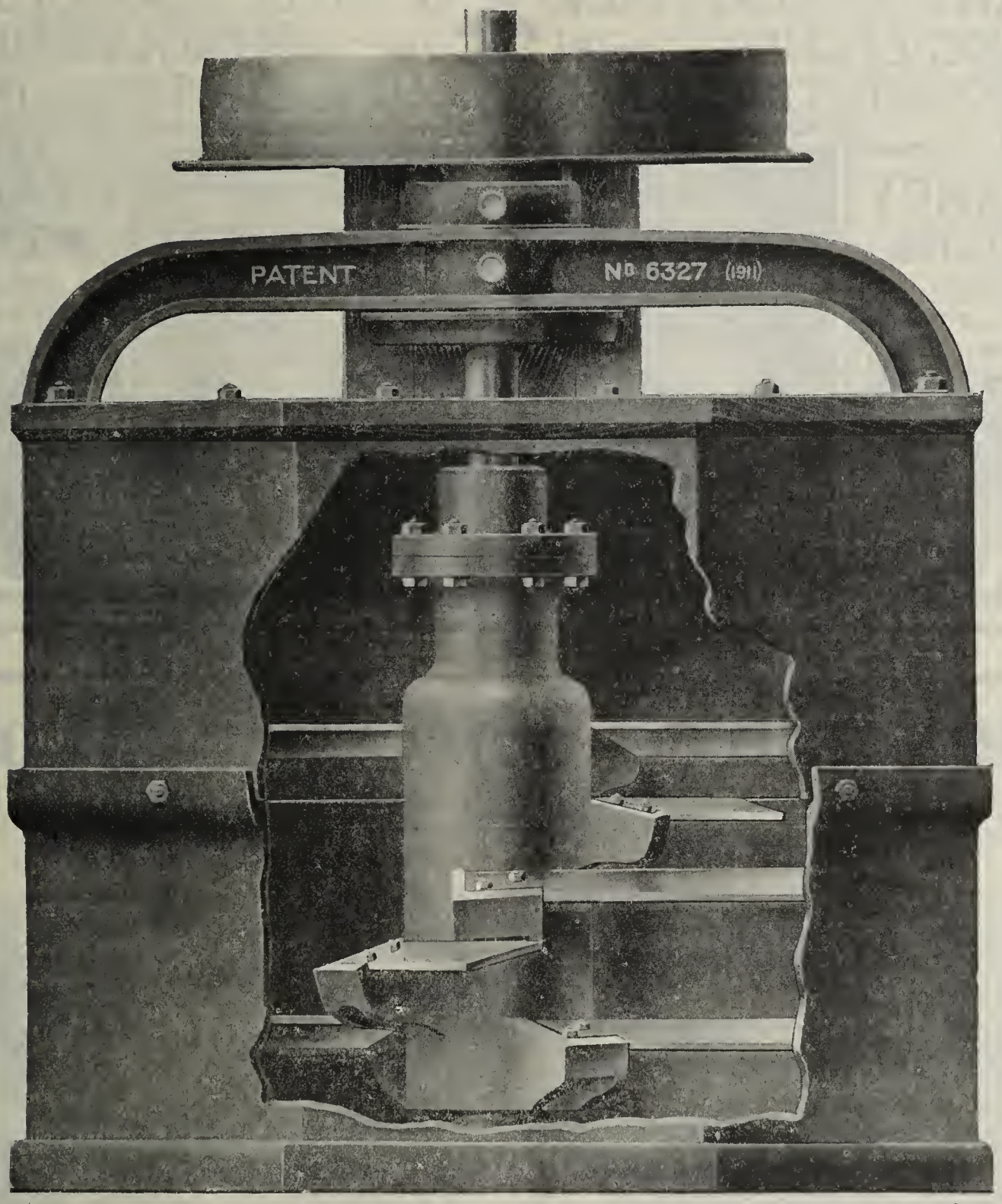
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Editorial Notes.

CROCKERY AND CULTURE.

DURING our long period of pleasant intercourse with pottery dealers we have often had occasion to notice how many of them were gentlemen (or ladies) of marked culture. Some possessed a high degree of musical talent, vocal or instrumental, and exercised it willingly for the pleasure of their friends or the benefit of some good cause; others had pronounced artistic abilities which found an outlet in drawing or painting or in literary or dramatic pursuits; others, again, being good speakers or organisers, were able to take a leading part in useful social, municipal, political, or religious work. The "side-lines" of these traders would have delighted the poet who, deprecating the usurpation by "shop" of a man's whole time and energy, wrote:—

> I want to know a butcher paints,
> A baker rhymes for his pursuit,
> Candlestick-maker much acquaints
> His soul with song, or, haply mute,
> Blows out his brains upon the flute.

The interesting question presents itself: Does the selling of pottery exercise a specially elevating influence on those engaged in it, or are people of refinement naturally attracted to an occupation which brings them into daily contact with beautiful wares? Whichever is the true explanation, and there is much to be said on either side, we certainly have found that among our friends the dealers there is undoubtedly an unusual number of persons of superior intelligence with whom it is a pleasure to deal; and we have no doubt that this experience could be confirmed by their customers on the one hand and by the manufacturers on the other.

THE WORKING OF THE SHOPS ACT.

THE powers given to the various local authorities under the Shops Act in the matter of granting exemption seem likely to nullify the whole effect of the legislation. There are, of course, some of our readers who will not complain of this; but it is probable that the vast majority of retail traders would like to secure a weekly half-holiday if it were possible to do so without the loss of trade. The widespread exemptions recently granted in the big provincial towns make it exceedingly difficult for any retailer to feel that he is safe in shutting up his establishment at any time. It appears to us—and this feeling is very prevalent at the meetings of retail traders' associations—that the only satisfactory way of dealing with the situation is to enact a statutory half-holiday on one fixed day for the whole country, without any local powers of exemption or possibility of contracting out. It may be regarded as certain that if such a policy were carried out for six months the whole of the retail traders of the nation would become accustomed to it, and think no more of shutting up their places on the statutory day than they do of shutting up on Sundays. It

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is quite impossible to differentiate between trades while the present system of overlapping obtains. The shopping public would, of course, find some inconvenience at first; but so would the same public in certain Continental cities were the shops shut on a Sunday. At the same time, by a fixed statutory day, the value of the half-holiday would be very much enhanced. At present two assistants—say bosom friends—one with an ironmonger and one with a draper—cannot take their excursions together into the country, or go upon a joint cycle expedition, because one of them can go only on a Wednesday and the other only on a Thursday or Saturday. The confusion of the present method is quite unnecessary, and has only brought general discredit upon legislation which was meant to promote the greatest happiness of the greatest number.

OUR PRIZE COMPETITION.

AS announced in our January number, we are offering a first prize of £5 5s. and a second prize of £3 3s. for the best appreciations of any lines of goods advertised in our issues of February and March, subject to the following conditions:

The appreciations must not exceed 500 words in length; they must be plainly written on one side of the paper only, and must reach our offices not later than March 15, 1913. The competitors must be subscribers to THE POTTERY GAZETTE or in the employ of subscribing firms; they must have personal experience in handling the goods described; they must refer to the goods on their merits only, irrespective of the business methods of the makers; and they must have no interest, direct or indirect, in the firm making the goods. A declaration to this effect must accompany the competing contribution. Each contribution must refer to one particular line of goods, but any competitor may send in more than one appreciation. Manufacturers may only compete with regard to materials and accessories.

The decision of the Editors of THE POTTERY GAZETTE with regard to the awards shall be final, and they shall be at liberty to publish all or any of the contributions in the columns of the GAZETTE.

We hope to announce the result of this competition in our April Special Issue.

THE NEW RULES IN OPERATION.

AS was announced in our last issue, the Home Secretary has adopted the new regulations for potteries recommended by Judge Ruegg, and has put them into force. Those who are familiar with the Potteries, however, will be well aware that some time must necessarily elapse before the rules come into operation. We trust that they will be administered with a wise discretion, as otherwise some struggling manufacturers will be forced to the wall and their employees will be deprived of their means of livelihood. It must needs be realised that many of the "potbanks" were erected in days when factory legislation was unknown; and that some have remained practically unchanged through the conservatism or poverty of their owners, whose successors must now suffer because a parent or grandparent when warned to put his house in order neglected to do so, holding that it would "last his time." So that changes, however beneficial, must be effected slowly, if a total stoppage is to be avoided.

Knowing the Potteries as we do, we can see that the ventilation problem will be rendered fairly easy of solution, partly by reason of the many excellent appliances now on the market, but still more so by the plan of building the factories round a courtyard with plenty of window space, and having most of the workrooms on the upper floors. The frequent cleansing will present more difficulties, and may necessitate the replastering and reflooring of some rooms and the clearing out of a good many passages and odd corners. Where space is already cramped it will also be an awkward question how to fit in the new lavatories, messrooms, &c. But the hardest task of all will be to secure the co-operation of the employees themselves in carrying out the measures that have been designed for their protection. The tendency to stop up every crack or cranny through which air can enter, the heedless and perfunctory ablutions, the tasty snack eaten in a dusty room and pawed by grimy hands—all are potent sources of danger which legislation is powerless to prevent. We wish our friends the potters a happy issue from all the troubles in which the new rules involve them, and can only hope that the workpeople may benefit as much as is anticipated by the most optimistic of their well wishers.

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE February meeting of the English Ceramic Society was held at the Municipal Secondary School, Hanley, on the second Saturday of the month, when Mr. J. M. Coon, of St. Austell, made his second appearance before the Society as lecturer. Mr. R. Shenton occupied the chair, and there was a good attendance of members.

It may be remembered that just over two years ago Mr. Coon delivered his first lecture before the Ceramic Society under the title, "China Clay," and the text of this was reported in THE POTTERY GAZETTE, of February, 1911. It was a masterpiece of technical terms, and the present lecture will certainly keep it good company.

This time Mr. Coon chose for his subject "Cornish Stone," and the lecture was the result of a compact made between the lecturer and Dr. Mellor, the Society's secretary, on the occasion of the official visit to the clay mines and stone quarries of the West of England in May, 1911. Mr. Coon undertook to investigate the subject from the geological side and Dr. Mellor from the chemical. Owing however, to pressure of work in the County Laboratory at Stoke, and the fact that the staff there have been circumscribed for some time past in their operations due to insufficient facilities, Mr. Coon's labours were completed first, and the lecture delivered by him on Feb. 8, and here reviewed, is the result of work consistently done by Mr. Coon between then and now—work, however, which, in the preface to the lecture, he described as extremely pleasurable. He expressed the hope that the work in its completed form would be in some measure agreeable to his audience, as it had been to him to pursue the investigations.

The rock, he said, bearing the name "China Stone" came into economic notice on its discovery, and used by Cookworthy as a desirable constituent for pottery bodies and glazes. The history of its discovery, and its early employment in the useful arts, had so often been published as to render its repetition here unnecessary. It had been suggested that one of Cookworthy's names, "Growan," was a corruption of Crowan, the name of a parish and village in the neighbourhood of Tregonning Hill, where the rock was first discovered. The word survived as the name of the disentegrated granite usually found between the soil and firm granite or china clay beneath. The modern terms "China Stone," or "Cornish Stone," obviously had their origin in the use

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and locality of occurrence of the rock. In his book "The Hensbarrow Granite District" (1878), p. 31, Mr. J. H. Collins gave the first scientific account with analysis of the stone, and suggested the name "Petuntzyte," which might with advantage be adopted as the rock name if the earlier names of Cookworthy were not used. A more detailed article in "Leadless Decorative Tiles" (1904), p. 315, by Mr. W. J. Furnival, contained much interesting information, and referred to other books in which it had been described. The greater depth to which the quarries were now developed afforded opportunity for more accurate study, and earlier writers would probably now modify some of their original statements. The Ordnance Geological Memoir, "The Geology of the County around Bodmin and St. Austell," contained more modern particulars.

The lecturer said that his present discourse was the result of an independent inquiry by himself, with frequent assistance from Mr. J. H. Collins. Passing reference only was made to the chemical part of the subject, as it was understood that this would be dealt with later by Dr. Mellor and his assistants. Geologically considered, this rock formed part of the granite masses of Cornwall, possibly those portions which crystallised late in the solidification of the rock. Its occurrences were principally noted at Tregonning Hill and Penryn in West Cornwall, and St. Dennis in East Cornwall. A portion of the granite at Goonbarrow was of somewhat similar nature, but contained so much dark mica and tourmaline that it was unfit for use except as building stone. In general terms the structure of this granite might be described as holocrystalline, fairly even medium grained, with many much finer grained inclusions. Pegmatitic structure was sometimes present. Here and there cavities appeared to have existed, some apparently formed by the enclosing minerals not meeting others dissolved out. Both kinds were filled with crystals of mica, felspar and fluorspar.

The lecturer proceeded to give particulars in connection with the rock as it occurs in the western extension of the Hensbarrow Granite Boss, over an area approximately two and a half miles from north to south, and one and a half miles from east to west; within these limits the granite would have the general petrical character of the china stone; large portions, however, were quite unsuited to use in pottery work, and other portions were so fully decomposed as to be worked for china clay. The jointing roughly conformed to that of the surrounding granite, i.e., there were vertical joints called "heads," horizontal joints called "beds," and others approximately at right-angles to the other two, the mass being thereby divided into cuboid forms. The rock cleft parallel to the "beds" with greatest ease and the "grain" of the stone was said to be in this direction. Vertical joints extended uninterruptedly for great distances, and gave a characteristic appearance to the quarry faces, being emphatically both tabular and columnar.

Three lantern slides were here shown of photographs taken in Marshall's Quarry, (1) illustrating vertical face cuboid blocks, (2) columnar joints, and (3) a column with dark mica. Strangely enough, these joints were often limiting planes for the presence or absence of fluorspar, and other minerals, light coloured mica being found on one side and dark on the other. The joint faces might be in contact or separated, and frequently the spaces between them were filled with quartz or mixtures of quartz, felspar and fluorspar. Blocks of varying sizes, and bounded by joint faces were constantly raised, the exterior portions of which were white, and practically free from fluorspar, but the interiors were conspicuously coloured. Alteration effects were very manifest in the white portion. A photograph of a china-faced block of stone was here displayed. The soil was of a peaty nature; next under was a varying depth, disintegrated and much stained from surface infiltration, known by the local name of "Growan"; below, again, the more or less compact rock, slightly stained, was marketable under the name of "Buff Stone." This formed the original quality used in pottery. With increase of depth the rock became gradually harder, whiter and fresher, until the "Hard White" and "Hard Purple" of commerce was reached, the latter, in the lecturer's opinion, being the original condition of the rock.

The dominant mineral, plagioclastic felspar, was characteristic of the basic rocks. This stone, however, belonged to the acid division, its acidity probably accounting for the late crystallization in the mass. The general terms "plagioclase" or "plagioclastic felspar" were used to designate that showing the polysynthetic twinning after the Albite Law. The extinction angles measured on selected crystals gave from 0 to 4 deg. Another set gave from 8 to 12 deg., and another from 15 to 17 deg. from which it was probable that oligoclase, albite-oligoclase, and albite were all present.

The most obvious constituents, as seen in hand specimens were felspar (from white to cream in colour) quartz (dark grey and frequently lustrous), mica (light or dark in colour) and fluorspar (bluish purple). Microscopical examination revealed that topaz was generally present, and tourmaline occasionally. When the latter mineral was conspicuous the rock would be much decomposed. Magnetite was an inconspicuous component. A photograph taken from Luke's Quarry was shown. When kaolinization of the felspar had taken place the vermicular forms seen in china clay were equally present, and minute hexagonal flakes of muscovite were more plentiful. A photograph of the vermicule was also thrown upon the screen. The sections prepared for this lecture exhibited the following characteristics:—"Buff Stone" showed the minerals much fractured, the bounding planes and fractures being rendered conspicuous by the infiltration of oxidation products. The felspars were much coloured by decomposition. Mica was much altered, the interference colours being very dull, and parts which might have been fluorspar were brown, cloudy areas.

In the "dry" and "medium" "white stone," decomposition might have proceeded sufficiently far to reduce to a friable mass, or the stone might be fairly compact; oxidation products were practically absent. Magnetite was more conspicuous; fine mica as an alteration product might be present, principally as plumose growths of gilbertite. A photograph of plumose gilbertite in contradistinction to albite was exhibited. In the "hard white" the minerals were fresher, but the felspars bore evidence of at least incipient alteration; mica was more conspicuous, and topaz was present. In the "hard purple" the minerals were comparatively fresh, and showed little signs of alteration. Fluorspar and topaz were regular and characteristic components.

In the plagioclastic felspars, the polysynthetic twinning was conspicuous, and in the freshest specimens very fine and sharply defined. Decomposition introduced breaks in the lines, secondary mica and greisewing. Orthoclase—as individual crystals and Carlsbad twins—was perceptibly more altered than the plagioclase, distinct areas of a crystal being transformed to mica or kaolin, as the case might be.

Quartz showed the usual inclusions of liquids and gases characteristically arranged. Sometimes the faces were corroded, alteration products filling the spaces

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so formed. The mica was always muscovite or one of its varieties, principally gilbertite and sericite. It was found primary, as a micaceous filling of cavities, and as alteration product. The colour was generally white or very light yellow, but it was also frequently brown and green. A photograph was shown of corroded quartz sericite.

Topaz was generally present as to merit the classification of a normal constituent, but had not been observed in the softer and decomposed parts. Mosaics of aggregated crystals were frequent, the individuals being generally fractured; often the exterior contours were rounded or indented, suggesting that some crystals had been subjected to resorption, in other words, that they were formed before complete crystallization of the mass. Characteristic inclusions were present, sometimes rather conspicuously.

A section of the lecture was devoted to a consideration of the mutual relationship of the minerals, and was profusely interspersed with descriptive slides. Orthoclase was found enclosing crystals of plagioclase, generally in well-formed crystals (quartz in irregular grains and pegmatitic fluorspar as grains), irregular crystals, and zigzag forms, in the latter case sometimes in association with sericite.

Dealing with magnetite and dendrite magnanous oxide growths, the lecturer said that sections from deeper lying rock showed the mineral and its inclusions in freshest condition. Quartz and magnetite appeared to be primary endomorphs. The evidence in respect to fluorspar was not so definite; dendrite and sericite were probably secondary. Quartz was perimorphic in respect to plagioclase, and in small quantities endomorphic in respect to orthoclase.

Muscovite enclosed conspicuous quantities of fluorspar, chiefly in elongated, irregular forms, oriented parallel to the cleavage planes of the mica, somewhat like "graphicy" structure. To the lecturer the appearance and the prevalence of this mineral in the freshest stone indicated primary relationship. As sericite it filled the crystal cavities formed by the removal of the other minerals, and as gilbertite principally an alteration product of the felspar.

Topaz was another endomorph of muscovite. Fluorspar, in addition to the endormorphic relation to orthoclase and muscovite, was found as a crystallised constituent, showing its characteristic properties. Usually it took the shape permitted by the surrounding crystals, but idiomorphic forms were seen. He had seen flakes of sericite enclosed, but this was very rare. Not infrequently it enclosed well-formed crystals of plagioclase. Topaz was found as largish groups of variously oriented crystals, with characteristic crystalline liquid and gaseous inclusions, also as somewhat corroded enclosures in muscovite, and as groups of small solitary crystals in orthoclase. When contact alteration had taken place the topaz appeared to be the altered or dissolved mineral.

The concluding portion of Mr. Coon's lecture was concerned with the history of the rock. The facts enumerated, he said, appeared to justify the following conclusions:—(1) Magnetite crystallized out very early from the magma; (2) topaz also crystallized early, antecedent to mica, and possibly in two or more generations, as was evidenced by the larger more or less corroded crystals and enclosures, and smaller and angular euhedral grains; (3) plagioclase probably followed, as it was found enclosed in all remaining mineral constituents, viz., mica, fluorspar, quartz and orthoclase; (4) mica and fluorspar appeared to follow crystallizing almost contemporaneously and enclosing one another; (5) quartz and orthoclase followed as the last crystallisation products of the magma.

At least two alteration processes followed, viz.:—(1) Pneumatolysis, in the destruction and altering sense in relation to the constituent minerals, probably originating in the action of certain residuals of magmatic differentiation, assisted by intratelluric influences, and resulting in formation of secondary minerals, such as tourmaline, sericite, gilbertite and probable migration of fluorspar from the interior of the rock to the veins and joints; (2) weathering, principally extratelluric in origin, and causing oxidation and mechanical disintegration of the rock.

The lecturer remarked parenthetically that he wished to define what he meant by pneumatolysis, because modern use of the word had widely extended the operation of its original meaning. The original meaning was essentially one of destruction, but the meaning of the word was now extended to alteration of the rock surrounding igneous masses by the exhalation of gases, vapours and liquids from the igneous mass through the surrounding parts. He did not use the word in the more modern sense, but in its original sense of referring to a residual portion of the magma which did not form itself into definite mineral compounds, but which on the cooling of the rock left certain active ingredients uncombined. These, with the cooling of the rock again became active agents for the production of chemical alterations. In the case of china clay they thought this influence was fluorine, assisted by water in circulation, and that this attacked the orthoclase. In the case of china clay they thought that this had somewhat altered the stone, but that the effect had not gone anything like so far. They had not at present got the evidence that fluorine in the form of tourmaline was the active agent, but rather that the effect was produced by the migration of fluorspar from the interior of the stone to the exterior, where it was found in veins in comparatively large masses.

Chemically, china stone might be regarded as an acid rock, and called a soda granite to distinguish it from the ordinary granite in which potash felspar predominates. The effect of alteration would depend on whether it was chiefly confined to oxidation migration of the fluorspar, kaolinisation or micaisation of the felspar, each change having presumably its own action in respect to the ceramic use of the material; the lecturer thought that the microscope could render valuable assistance in this direction by indicating what changes had taken place, and their possible effect on the composition of the rock.

No analyses were quoted for the reason mentioned in the early part of the lecture. He found, however, from the comparison of several which had come into his hands that hard stone would average about 70 per cent. silica, ranging from 66 to 73 per cent., 18 per cent. alumina, ranging from 16 to 20 per cent., 7 per cent. alkalies, the balance consisting of the oxides of iron, lime, magnesia. manganese, water of crystallisation and fluorine.

The water of hydration varied from only a fraction per cent. to over 2 per cent., and the presence of the oxides of iron, lime, magnesia and manganese varied also in proportion to the amount of change which had taken place in the rock.

Fluorine would also be dependent upon the presence of the amount of fluorspar that was in the rock, i.e., whether it had migrated or whether it was free. In the "Buff" and "Dry White" he supposed that no traces of it were to be found. In the case of the "Hard Purple," or those qualities which showed the blue in the largest amount, naturally there would be a higher amount of fluorine. He did not think the fluorine affected the ceramic industry in a technical sense, because a few days before certain experiments had been made by a gentleman of repute in London to try to improve the stone by fusing it in the

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presence of fluorine, but there was no evidence to show that it had the effect of making it either more vitreous or of changing its colour.

The specific gravity ranged from 2·5 to 2·7 per cent., dependent on the condition.

A discussion followed the lecture, in which Mr. R. Shenton, Dr. Mellor, and Messrs. J. A. Audley and W. Jackson took part.

A vote of thanks to Mr. Coon was afterwards proposed by Mr. R. H. H. Jones, who said that the lecture was an evidence of how keenly a man could interest himself in his work. They could plainly see that it had been a labour of love, and they all recognised the great amount of work which had been entailed in its preparation. Above all, they recognised and appreciated the generous geniality of the lecturer. It was not always they found such a measure of geniality to the accompaniment of such a measure of knowledge. One thing at any rate the lecture made them feel, and that was that the potter did not meet all the difficulties in the world. He hoped that Mr. Coon would take them as sincere when they told him that this and that would not suit their needs. If ever the time should come when they could find a use for those refuse products which had to be eliminated down in Cornwall before sending on to the Potteries the stone for pottery use, they would certainly be only too willing to do so, because they would then be able to get their china stone so much cheaper.

Mr. A. G. Richardson seconded. He said he was very pleased to have the opportunity of seconding the vote, because he considered that the lecture was a valuable addition to ceramic literature. He would like to make one observation. White and buff stone had been referred to by the lecturer and compared with purple, and Mr. Coon had suggested that he did not see why the potter should not use the white and buff. He (the speaker) daresay a good many potters present could advance the reason, but they had not the time, just then, to discuss that matter. There was one thing he would like to suggest to Mr. Coon, and that was that he should try to discover some magic power that would convert the white and buff into purple. In that case the potter would be only too willing to take the lot.

Mr. Coon, responding, said it had truly been a work of love; and whilst he thanked them very much for the attentive hearing which they had accorded him, and for the vote of thanks which they had been good enough to pass, he had had his full value in pleasure in the preparation of the work. They would certainly do their best down in Cornwall to supply the potter with a material that was desirable, because, after all, the desirable article was the one that would fetch the most money in the market, and the man who was prepared to put upon the market that which the market demanded would always be able to get a fair price for his commodity.

The next meeting was announced for the second Saturday of March, probably at the County Pottery Temporary Laboratory, Stoke-on-Trent, when Mr. W. Thomason, of Lambeth, will provide his second contribution.

The Imperial Potter.—While inspecting an exhibition of wares of his own manufacture in a jeweller's shop in Unter den Linden, Berlin, recently, the Emperor William remarked that his pottery had already sent 32,000 silver-mounted ash bowls to various parts of the world. Of the great variety of articles which he saw that morning—vases, salad dishes, jugs, biscuit boxes, and inkpots—many have been modelled on prehistoric remnants found on the Cadinen estate, while the silver mounts in some cases were designed by the Kaiser himself.

SOME NEW YORK POTTERY AND GLASS TRADERS.

IN the special holiday number of the New York "Crockery and Glass Journal," several prominent gentlemen engaged in the pottery and glass business in the United States narrate how they became connected with the trade. To the question of how he became a crockery man Mr. Robt. Slimmon replied: "Through John W. Burgess, of the International Pottery Co., Trenton, N.J. Mr. Burgess was visiting Europe in 1879 and told me that if I would come to the States he would make a place for me. I came over the next year, and was put into the warehouse to learn about the goods. In 1880 I took the New York store, replacing W. A. McBurney, who had been their representative. A little later I went with the Mayer Bros., now the Mayer Pottery Co., Beaver Falls, Pa., who were then importers. I gave that up, and in 1886 went to Europe, securing the accounts of A. J. Wilkinson & Co. and the Upper Hanley Pottery Co. I hung out my own shingle, adding later the accounts of Bourne & Leigh, J. H. Weatherby & Co., R. Sudlow & Son, Shorter & Sons, and Collingwood Bros., which I still control."

Mr. E. F. Anderson, of Geo. F. Bassett & Co., was asked: "How did it happen that you became connected with the crockery trade?" "Born in it!" came the staccato answer. Leaning back in his chair, with a broad smile he continued: "Did I ever tell you about my coat-of-arms?" "No; let's have it." "I once gave a dinner party at my house, with was attended by some people of note in the neighbourhood, including three prominent prelates. The conversation turned on ancestry and coats-of-arms, and everyone at the table described theirs. I was then appealed to for mine. I had never given the thing a thought, but something must be said, so I replied: 'My coat-of-arms is a cup rampant with a saucer couchant and the motto, "We break, but never bend!"' How did I become connected with the trade? My father was in it in Cincinnati. We came to New York in 1868 and he became a partner of Geo. W. Bassett. I went to school for awhile, and later my father wanted me to get into business and put me with Ott & Brewer, of Trenton. I went on the road, and made my first sale to Scanlon & McCarthy, of Rochester, N.Y. The bill came to $75, and my commission was $3.50—the first money I ever earned. A little later I bought three crates of English earthenware at auction and sold one of them to Hoyt Bros., of Katonah, clearing $15. Mr. Bassett then made me a proposition. I was to keep on selling on commission for whom I pleased. Any spare time I had was to be put in helping in the store, for which I was to have desk-room free. Eventually I gave my whole attention to the business of Geo. W. Bassett & Co., and in time became one of the firm of Geo. F. Bassett & Co."

Mr. J. King Irwin, New York manager of the United States Glass Co., when asked how it fell out that he fell into the business, said: "Line of least resistance, I guess; or perhaps it was in the blood." His father was the "Co." in King, Son & Co., Pittsburgh, but it was not until the age of twenty-three, when he completed his college course, that young Irwin, feeling a little uneasy with nothing to do, applied to Marion Bryce and Mr. Ripley, who placed him in the Philadelphia office of the United States Glass Co. He has climbed step by step from city salesman to road man, thence to the home office, and eventually became the manager of what is now the largest glass exhibit in New York.

The Editors would be pleased to receive similar accounts from members of these trades on this side of the Atlantic for publication in The Pottery Gazette.

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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

The Worcester Royal Porcelain Co., Ltd., are holding their spring show of new models and decorations at their London show-rooms, 8, St. Andrew's-street, Holborn Circus, E.C. The display comprises so many beautiful and interesting specimens that it is difficult to select any for partieular notice. The company have very wisely revived some of their old models, and what "Old Worcester" means is well known to connoisseurs. The styles selected for reproduction are those which will harmonise with the Adam decorations and Heppelwhite and Chippendale furniture now in vogue. Some of these pieces we are privileged to illustrate. The ornamentation is mostly in white and gold of chaste designs, but there are also some choice effects in green, white and gold, forming a combination which might well be taken by a decorator as a basis for a scheme of decoration to prepare a whole room in keeping. Turning from these severely beautiful types, we find a splendid series of "de luxe" vases and bowls richly decorated with old still life designs, flowers, fruit, views, cattle and birds. In these the ornament is freely applied, but is not over-lavish. Enshrined in a glass-fronted cabinet is a small selection of perforated ware; each piece worthy of a special description did space permit. The deft hand of the workman has literally honeycombed the strong porcelain body, and the result can only be described as ceramic lace-work. In a "sanctum sanctorum" are kept some wonderful plaques, bright with painted roses which are studied direct from nature, so that one can recognise the various types. (Very different from the nondescript abortions which some makers affect.) Similar roses are applied to a fine range of vases. Other exquisite plaques bear artistic representations of fruit, even the bloom on the grapes and peaches being accurately depicted. Quite a "tour de force" is a magnificent vase in Oriental style, with a gay peacock against a light blue background. A feature of the Worcester vases is the exquisite finish of the tops, mounts and feet, every detail being perfect. The colour of many of these mounts is the famous Worcester bronze, but in some there is a very effective blend of this bronze with the equally typical ivory shade. A fine series of bowls is decorated simply with this combination of ivory and bronze with appropriate gilding. Special mention must be made of the studies of storks and flamingoes against light blue backgrounds. In the case of the flamingo the delicate rosy tints of the plumage are admirably suggested. Another pleasing line comprises "Claude" landscapes after Claude Lorraine, in which the principal features are grey ruined buildings and wind-warped trees. The Worcester artists know well how to hold a mirror up to nature, and evidence of this is found in a plaque representing a clump of mushrooms, the painting of the pink shades and foliation of the under sides being most natural. Another design which is both beautiful and natural, consists of blackberries, with the leaves in their russet autumn tints. A new floral decoration is that of the iris applied with great effect to flower bowls; and here we may remark that Worcester flower bowls have no "back and front," but are decorated all round alike, so as to appear attractive from every point of view. A lack of space prevents our dwelling upon further details, but we must mention, in passing, that the collection of figures fully maintains the company's high reputation, and that there is a wide range of vases in the delicate cream tints which are perhaps most generally associated with "Royal Worcester." In all these are to be found that symmetry of form and delicacy of colour which makes this ware a never-failing source of delight to all persons of cultured taste. In the useful, as distinct from the purely ornamental lines, several novelties are being produced, and though we cannot now describe them we can assure our readers that they are of a most attractive nature. Some of the items of a definite Oriental type are particularly worthy of the notice of the trade.



THE WORCESTER ROYAL PORCELAIN CO., LTD. [*Photo. by "The Pottery Gazette."*

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R. Green & Sons, 31, St. Bride-street, London, E.C., glass importers, and china, glass, and earthenware agents, with sample-rooms (which are open every day) half-way between Holborn Circus and Ludgate Circus, make a special feature of table-glass, and show a number of pleasing suites, which they can supply from stocks in London. Stock cases include tumblers of all descriptions, wines, grogs, jugs, carafes and ups, decanters, oval and round dishes, with other useful and ornamental glassware. They show vases and tubes in crystal flint



RICHARD GREEN & SONS.

and green in cases containing variously assorted patterns, both cut and plain. This is a convenient arrangement, and meets the requirements of dealers who want variety without the necessity for keeping large stocks. Their small assorted cases of crystal cut jugs and carafes and ups are useful packages, containing four dozen plain crystal and two dozen cut star bottoms. Another very handy package contains five dozen thin crystal half-pint tumblers, eight dozen ports and six dozen sherries, three dozen clarets and three dozen liqueurs—in all twenty-five dozen in a case. The firm are showing a great variety of flower tubes and vases in crystal and green in artistic shapes and new cut patterns. We give illustrations of a few of their new vases supplied in cases containing seventeen dozen, half crystal and half green, at reasonable prices. As manufacturers' agents they show a nice assortment of domestic earthenware in many decorations, including such articles of every-day use as toilet ware, jugs, cheese stands and covers. They represent the Northfield Hawley Pottery Co., Ltd., Rotherham, and Baker & Co., Ltd., Fenton. The latter are manufacturers of granite ware and medium grades of earthenware for domestic purposes.

William Seelig & Co., of 19, Fore-street, E.C., are extensive importers and distributors of numerous Continental specialities. Amongst other interesting, useful and ornamental lines they are the sole representatives in this country of the versatile productions of the Hessian Potteries, Waechtersbacher Steingutfabrik, Schlierbach, near Wächtersbach, Germany. Seelig & Co. have extensive sample-rooms, and have always displayed many Continental productions. I had an opportunity of going through most of their well-stocked departments, but cannot do more than refer briefly to their numerous samples of useful and artistic pottery for table use and domestic purposes generally. Continental pottery in fancy lines we are all familiar with, and there are good examples of it in these rooms, but Seelig & Co. are showing a great variety of pottery manufactured by the Hessian Potteries on British lines. This includes fancy basket work, vases in neat decorations, and even toilet ware. The whole of one of their large floors is given up to pottery of all kinds, in which tea services figure largely in many shapes and ornamentations. Coffee services, coffee cans, milk jugs, cups and saucers, comports, sauce bowls and plates, round and oval plates, cake stands, and a large number of plates decorated with nursery legends (and one with the signs of the zodiac on the rim) make up an interesting collection. Teapots, egg cups, serviette rings, and a host of other sundries are shown in neat decorations and at moderate prices. A special line is a tea service with ivory body, plain and decorated. The firm show stands, tables, and cabinets in ivory to match the body of the ware. There are white stands for toilet ware for office use which are highly ornamental, as well as useful. These are handsome shut-up cases. They supply wooden racks for dinner ware, stands for plant pots and wall cases for jugs, plates, and domestic jars, decorated to match the pottery to be shown on them. They only supply woodwork to match their pottery. The combinations are very effective, and ensure a better appreciation of the company's pottery. There is a nice assortment of artistic and fancy furniture in other departments, but that is not so directly interesting to our dealers. Seelig & Co. have had the representation of the Hessian Potteries for some time, but have hitherto devoted themselves to the large stores and some of the wholesale houses, and they are extending their connection amongst provincial dealers. They have a good reputation on the Continent and are acquiring one in this country. They publish a number of well illustrated descriptive price lists.

Joseph Bourne & Son, Denby Pottery, near Derby, have been established for more than a century as manufacturers of Denby stoneware, glazed without lead. Their London offices and show-rooms are at St. Andrew's House, Holborn Circus, E.C., and are under the management of Mr. A. J. Dale, who has always on show samples of the firm's principal lines. "Bourne's List" has familiarised the trade with the extent and the variety of the firm's many departments. At the present time prominence is given to a number of novelties for the Easter and spring trade. Some lines are always in demand, while others are especially adapted to particular seasons. Foot warmers, flower vases, bulb bowls, and cooking utensils have their season, and at the present time flower tubes and fern pots are the quests of dealers. Bourne & Son anticipate this demand, and have provided some very pleasing novelties in a large variety of shapes and colours. The new forms for the coming spring trade are as artistic as they are useful. Plain tubes, as will be seen from our illustration, are graceful in outline, and are shown at the London rooms



JOSEPH BOURNE & SON.

in all sizes from 3 in. up to 14 in. in height. Similar tubes, plain top and bottom and white roughed centre, are also shown in all sizes. Other shapes include handled tubes, the "Paxton," trumpet-shaped, and fluted tubes with classical handles. The large collection of these displayed in London emphasises the advantage to dealers in showing such productions in groups, instead of distributing them in units all over the shop. Some quite new colour schemes are employed with great success. The plain, solid colours include a very pretty pink—a light variation of Rose-du-Barry—a new shade of celadon, and

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a novelty called Heather-bloom. The beauty of these is the uniform colour which is maintained in the several ranges. The firm's green glazed ware is as popular as ever and appears likely to remain so. I have only mentioned the new lines in flower tubes, but samples are shown of bulb bowls, fern pots, plant pots, and small vases for growing single bulbs are shown in the familiar green glaze. Bourne & Son have been appointed sole manufacturers of "Blitz Flower-holders" in green stoneware, which are specially adapted for use with the green stoneware flower tubes—a very useful combination. "Bourne's List" is a handy book of reference for dealers in stoneware, and will be sent to established tradesmen on application.

Mr. Sampson Smith, china manufacturer, Longton, is represented in London by R. Green & Sons, 31, St. Bride-street, E.C., who show samples of all his principal productions in tea and breakfast sets. Mr. Sampson Smith specialises in underglaze colours, matt blue, dark blue, &c., as he has done for upwards of sixty years, but in the last decade he has greatly improved the quality of his ware. He has for many years had a high reputation for earthenware figures and reproductions from the antique. There is still a demand for these decorated in colours and gold, but they are not now required so much for the home market as they once were, but they are still good export lines, and Mr. Smith gives special attention to shipping orders for them. He is, however, making a much better class of tea and breakfast ware, and Green & Sons are showing samples of his latest productions. The body is nice and light and the decorations are in good taste.

James Macintyre & Co., Ltd., Washington China Works, Burslem, are making an important change in their business. The company are world-famous as manufacturers of porcelain specialities for all trades, and particularly of pottery for electrical purposes. They have also acquired a reputation for high-class ceramics, including dainty table accessories. The electrical branch of their business is increasing to such an extent that they have decided to direct their efforts most exclusively to its development. With this object in view they have made an arrangement with their art potter, Mr. William Moorcroft, under which he will take over the whole of their artistic business. Mr. Moorcroft has for many years had the sole control of that branch, and has been responsible for many unique artistic productions, for which Macintyre & Co., Ltd., are now so well known. "Moorcroft Faïence" is highly appreciated in the trade, and by commission and under the new arrangement it will be produced even more extensively. Mr. Moorcroft is having new works built with the most improved modern arrangements, and he hopes in a few months to have them in perfect working order. There will be no cessation in the production of the art ware, as Macintyre & Co. will continue it until Mr. Moorcroft opens his new factory, which will be in Burslem. We heartily wish Mr. Moorcroft every success in a venture for which he is so especially qualified, and we congratulate Macintyre & Co., Ltd., upon the development of their electrical and general trade specialities, which has rendered the contemplated change necessary.



Empire Notes.

Earthenware and Glassware are mentioned in an official report from Trinidad as being among the articles in which British exporters have to meet competition from the United States.

S. Schneiders & Son, general exporters, 25, Old-street, E.C., inform us that their Mr. A. Sniders is now on his way home from Australia, and will again be in England early in March. He will shortly be visiting the Potteries for his new season's orders.

Reviews.

Faenza (Bulletin of the International Museum of Ceramics at Faenza, Italy). No. 1.

THIS Bulletin opens with a brief foreword concerning the museum and its objects. Two illustrated articles follow, one by A. Clairant, on three pieces of Verona faience in the museum, and the other dealing anonymously with Russian ceramics. A few historical documents are reproduced and some statistics concerning the ceramic industry in Italy are given. A paragraph on the Use of Lead in Pottery is quoted from THE POTTERY GAZETTE. Answers to questions, notes on new acquisitions, and a brief bibliography conclude this number of the publication, which we trust may have a successful career.

Transactions of the English Ceramic Society. Vol. XI., Part II. Price (to non-members) 30s. Hughes & Harber, Ltd., Longton.

IT is a sign of the commendable activity of this Society that its Transactions for one session (1911-12) should require two part volumes to contain them. In that under notice are recorded the proceedings from March to May, 1912, which have already been reported in THE POTTERY GAZETTE. The report and balance sheet for the session are also included, and Mr. H. Townsend gives an account of the Society's Continental Tour. Nearly half the volume is occupied by a series of abstracts of technical papers published in England and America and on the Continent.

Dictionary of Applied Chemistry. By Sir Edward Thorpe. Vol. II. Price 45s. net. London: Longmans, Green & Co., 1912.

SIR EDWARD THORPE and his expert collaborators are compiling a work which constitutes almost an Encyclopædia rather than a Dictionary, and cannot fail to be of the greatest use to those engaged in every branch of industrial chemistry. The second of the five volumes ranges from Chi—Go, and covers several items which are of special interest to our readers. Twenty closely printed pages (719-739) are devoted to "Glass" and contain a succinct survey of the history, technology, properties and uses of this substance. The section would, indeed, form a useful booklet by itself. "Glazes" are dealt with under "Fritts and Glazes" (pp. 599-603). Leadless glazes are handled with, perhaps, more sympathy than they deserve. The notice of Enamels (pp. 333-5) is confined to "vitreous compositions capable of adhering by fusion to the surface of metal or pottery." We await with interest the publication of the volume containing the section on "Pottery."

POTTERY PRINTING.

(SPECIALLY CONTRIBUTED.)

LOOKING at it with the modern eye, it would seem inevitable that at some time or other the process of printing would be adapted to pottery. Its advantages are so manifest that they could not fail to occur to the more ingenious minded of our forebears. It is probable, however, that the difficulties to be overcome would not be thoroughly appreciated till the actual attempt had been made.

Successful pottery printing is essentially a matter of detail. The delivery of a sufficient body of colour from the engraving, the method of its transference to the ware without blotching or spreading, and its capacity to pass through the fire without peeling or blistering; these are some of the problems that would confront the tyro. Simple matters as they may appear to us now, in reality they are not so, and it is certain that an extraordinary amount of close experiment would be required before these difficulties would be successfully surmounted.

It seems likely, from the fragmentary accounts that have come down to us, that the matter engaged the attention of more than one individual at the same period, and various claims have been put forward for the honour of its first successful introduction. To decide among them to whom the credit is authentically due is an almost impossible task. It is, in fact, quite within the limits of probability that it was invented in two widely different places at almost the same time.

Some authorities boldly set it forth that a certain Sadler, an engraver and printer of Harrington-street, Liverpool, was the ingenious individual, and back up their statements by picturesque and plausible details. The idea originated, they say, in the pleasant sight of the happy youngsters at play around his printing establishment. He observed that one of their favourite pursuits consisted in picking up stray pieces of printed matter and sticking them on bits of pottery. Gradually or suddenly, as the case may be, the brilliant idea was thus evolved. The thing at any rate was worth trying, and he began making experiments forthwith. This is said to have occurred in or about the year 1752.

Of the progress of these efforts little or nothing is recorded, but we find that in 1756 Sadler made a definite claim to have succeeded. In this year he drew up papers, with affidavits, for the purpose of obtaining a patent for his invention. He and his partner Green were sworn to have printed no fewer than 1,200 tiles in six hours; which, if correct, was indeed no mean achievement. Again, a cloud of uncertainty envelops the matter, and we are left in doubt as to the result of these measures.

Sadler and Green certainly made a great success of the new method of decoration, and large quantities of pottery were sent to them to be printed. We learn that for years Wedgwood forwarded consignments every fortnight by wagon, from Burslem or Etruria, and with the thoroughness which always characterised the actions of that great potter, supplied them with exclusive subjects and designs, superior to anything previously used. One thing strikes us as singular, that Wedgwood should adopt and continue for so long a period this cumbrous and inconvenient method of making use of the invention of printing. Why he did not institute a printing press at his own manufactory is difficult to conjecture. It seems to give colour to the belief that Sadler and Green had succeeded in protecting their process and sought a monopoly of its use.

But one tale is good till another is told, and apparently while Sadler was still in the elementary stages of experiment, other claimants to the honour appear. We do not know the history of their essays—no details of inspiration derived from happy youngsters at play have come down to us. On the contrary, pretty nearly all we can learn is that about the year 1758 its accomplishment was credited at Worcester to one of two individuals, Holdship and Hancock by name, who, it is presumed, were employees at the famous pottery in that town.

As at Liverpool, when once the process was proved practical, rapid progress was made. Dr. Wall, the enterprising proprietor of the works, was quickly assured of its advantages, and both on and under glaze printing soon began to assume a considerable importance in the economy of the business. Elaborate border patterns were engraved and printed in a great variety of colours—deep blue, turquoise, pea green, marone, and yellow amongst the number. These designs were for the most part reproductions of Chinese patterns, or adaptations of Chinese motives. Further developments were the reproduction of portraits of various celebrities, one of the most popular being that of Frederick the Great. Carlyle refers to this portrait in his noted history of that monarch.

It is a difficult thing to know when finality is reached in any invention; no doubt these pioneers, knowing that the process was in its infancy, would have visions of immense developments, indefinable no doubt, but assuredly within the range of future practicability. These hopes, if they existed, have remained unfulfilled. It may be said with truth, that, except for one or two mechanical changes, not necessarily improvements, the century and a half that has elapsed has seen no alterations, either in the engraving, or in the means by which the impressions are produced or transferred to the ware.

To return to the course of events from 1758 we find that Hancock, who was a draughtsman and engraver at the Worcester Pottery, left their employ about the year 1772, and went to manage the Caughley Pottery. It was during his régime at this works that there was produced the famous design that is so indissolubly connected with English pottery—the Willow pattern. This, it is understood, entered on its marvellous career in or about the year 1780. Thus for over 130 years has this curious and unique production maintained its position in the ceramic world. While it is only a copy—it is, of course, of Chinese origin—it has undeniable features of a different character, and acquired from the hand of the engraver, one might say paradoxically, a stereotyped individuality of its own.

When the full tide of success in the new process had been reached, as one might anticipate, some of the limitations of the art began to be realised. Further than a certain degree of fineness of engraving, it was found that the impressions did not carry sufficient colour to be successfully transferred to the ware. To overcome this difficulty the process of "bat" printing was evolved. Binns of Worcester described the process as follows:—"The copper plate was stippled with a fine point by London artists after designs by Cipriani, Ang. Kauffman, Cosway, and Bartolozzi, or engraved with landscapes, shells, fruit, flowers, &c. The plate being carefully cleaned, a thin coating of linseed oil was laid on it, and removed by the palm of the hand from the surface, leaving the oil in the engraved lines or spots. Instead of paper, bats of glue were used to take impressions from the plate and laid on the china so as to deliver the oil marks on its surface, it was then dusted with the colour desired, the superfluous colour being removed with cotton wool, and then placed in the kiln."

By this means the difficulty mentioned was in a way overcome, as the oil, unhampered by the colour, would better fill the minute crevices in the plate and deliver itself afterwards from the surface of the glue much more readily than from paper. This process, it will be readily

understood, must have been a somewhat lengthy and careful business, and also only adapted for comparatively plain surfaces. The process has long ago fallen into desuetude.

One cannot find that any other interesting developments occurred for many years. Still we can imagine the more ingenious and fertile minds among our pottery workers lying in wait for any new ideas that offered a reasonable probability of being adaptable. It is probable that the popularity of cheap chromo-lithography produced the incentive to try whether some such process could not be used in copper plate printing. To such a source we may ascribe the introduction of two and three colour printing. Each colour required a separate plate, which was engraved with the part of the design, according to the separate colours of which it was composed. Impressions were taken off in the usual way and then superimposed in correct register on the ware, a process that required considerable skill and care. This style, when cleverly done, produced some very good results and was very successfully employed by a number of firms in the early seventies.

Naturally the modern chromo transfer has ousted this interesting form of printing from popular favour, and at the present day it would be difficult to find even specimens of the process in the district.

Its abandonment is somewhat to be regretted, as it was undoubtedly productive of some fine effects in the hands of a capable designer, such as are unobtainable in any other way. Its development in the direction of trying to imitate the natural effects of flowers, foliage, and the like was, perhaps, not its most suitable métier. The chromo transfer offers a much more adaptable means for this purpose. On the other hand, the reservation of a chromo transfer design to one firm means a considerable outlay, with the accompanying risk of part of an edition being left on his hands. A three-colour print of a simple character could be produced at a much lower figure, without the disadvantage referred to. Its revival is certainly worth the consideration of manufacturers on the look out for novelties.

Another technical achievement that had its origin about this time was what is known as gold printing. It was naturally found that to actually print in the precious metal was a very expensive and wasteful process. Some ingenious individual, however, found out a method of obviating this difficulty admirably, and quite simply. The design was printed in a viscid yellow colour, technically known as "gold paste," and afterwards dusted over with powdered gold, the superfluous metal being removed with cotton wool. This method is, of course, only practicable with fine or what is known as "best" gold. A method of printing in liquid gold has, one is thankful to relate, not yet been discovered. The only approximate effect capable of being attained in liquid gold is by means of rubber stamps, for the introduction of which we are indebted (or otherwise) to the Germans. This form of decoration leaves much to be desired from an artistic point of view.

It is only characteristie of the age that the ingenuity of the mechanical mind should be attracted to the possibility of a mechanical printer, a machine that would automatically perform the many tedious processes involved in hand printing.

A local manufacturer of remarkable initiative, and a corresponding ill-luck, is credited with the invention of a rotary printer, which at first seemed to threaten entirely to revolutionise the printer's occupation.

The principle of this machine is the introduction of a copper cylinder or roller, in place of the ordinary flat copper plate, on which the design is engraved. This is placed in a horizontal position in the machine, and rotated by mechanical power. Above this cylinder is fixed a broad steel blade in a lateral position, the sharp edge coming in close contact with the upper part of the roller. The liquid colour is placed behind this knife, which at one process presses the colour in the engraved parts and clears the remaining surface. A roll of paper is then brought in contact with the engraved surface, and the resulting prints cut off and delivered to the transferrer. There is no particular skill required in the management of this machine. Given the colour in a right condition, almost all that is required is to regulate the pressure and keep the edge of the knife of a requisite keenness. The saving of labour is considerable, but varies according to the class of work done. Its advantages are most manifest when large quantities of simple patterns have to be executed, and the demands of quality not too exigent. For the best class of work the old fashioned printer's press still maintains its time-honoured position. The steam-heated stove, and the metal tank with a continuous supply of running water for the washing off of the prints, instead of the fire stove, and the round capacious tubs requiring laborious filling and emptying, mark the only advances recent years have added.

The pioneers who patiently evolved the apparently casual but highly important details of the printer's art builded better than they knew. Each of these details is an essential. The proper surface and thickness of paper, the correct consistence of the size, the exact temperature of the stove, the proper grinding and mixing of the colour with the oil, the constituents of which are treasured secrets of the printer's mixer; all these things are requisite before a single perfect impression can be obtained.

These matters, however, being in order, the process is monotony itself, and the printer's mind is free to devote itself to the setting of the country to rights, to the probabilities of the St. Leger, or or to the framing of scathing retorts to the verbal amenities of the feminine element of which he is frequently the butt.

The old-fashioned printer was often a curious type, with strange peculiarities and very decided opinions, which he never altered. His unvarying, monotonous task, day after day and year after year, would seem to have crystallised his mind, and the penetration of new ideas would apparently require the proverbial surgical operation that is supposed to be necessary for the admission of a joke into the Scottish cranium.

In spite of new types and methods of decoration, printing well maintains its position. It is true there is a modern tendency to curtail the business of engraving. The manufacturer looks more closely into the cost of cutting a new pattern than of old. Engravers complain that the good old times of engraving are gone. The fine and skilful work that was the glory of the handicraft is no longer sought after. Fine engraving takes time, and time is money, and the more delicate work soon wears away and requires renovation. So coarseness and consequent cheapness are the order of the day, to the detriment of the better artistic qualities of the design. Still there are evidences that brighter days are ahead, and it is probable that skill and artistic ability will once more come into their own and be appreciated at their proper worth.

Russian Duty on Glass Phials.—The Governing Senate has confirmed the decision of the Customs Department that phials of whitened glass, uncut, must pay duty under sub-section (a) of section 4 of Tariff No. 77 (10 roubles per poud).

ITALIAN POTTERY.

(SPECIALLY CONTRIBUTED.)

VERY few records are extant of Italian pottery from Roman times to the thirteenth century, previous to which the ceramics were merely jugs and pots roughly made, without even a coating by way of ornamentation.

The first attempt to decorate Italian pottery was made by adding to the finished article a yellow lead glaze, occasionally treated with copper oxides, which stained it a bright green. Rough clay ornaments were sometimes added, and simple patterns were scratched on the smooth surface, but it was only in the thirteenth century, when Oriental and Spanish influences were brought to bear on Italian pottery, that works of art were gradually evolved. It was at this time that a white surface, with vivid colouring under a brilliant transparent glaze of metallic lustre, put in an appearance. This wonderful metallic lustre has in modern times been successfully revived, but it has never reached its ancient splendour, the secret of it having been buried with the makers.

Of all Oriental influences the Hispano-Moresque made the greatest impression on Italian pottery.

In the fifteenth and sixteenth centuries the introduction of tin-enamel supplanted the siliceous slip-coating with colour painted on, and covered with a transparent alkaline glaze, which was never very successful.



I.—ITALIAN POTTERS AT THEIR WHEELS. [*Copyright Photo., Argus, Milan.*

Italian ornamental pottery can be divided into four distinct classes :—

First, the native ware, made of dark red clay, coated with a kind of pipeclay, and lead glaze in yellow and green. The ornamental part was carried out in the Graffiato process, which was a rudimental form of engraving, or by scratching the white surface so as to reach the red below in patterns of various designs ; this had to be done whilst the white coating was still soft. This practice has never died out in Italy, and has been adopted by potters all over the world.

The first examples of these ceramics show a very rough workmanship, but they are an



II.—ITALIAN POTTERY : DIPPING. [*Copyright Photo. Argus, Milan.*

improvement on the articles plainly coated with green, yellow and brown glazes.

It is in the fifteenth century that the "Graffiato ware" became more artistic, splashes of colour making part of the ornamental scheme.

Second, the mezza majolica ware was known even before the twelfth century. Its chief characteristic is the crudeness of the patterns, carried out in clumsy stars, crossed strokes, painted on a white ground, covering a drab foundation. The coating of white was very thin, and obtained by dipping the rudimental pitchers into a white slip, composed in the first place of white clay to which oxide of tin and lead were subsequently added.

Third, majolica ware. The name given to this pottery is derived from Majorca, the Spanish island where it originated, and whence it was imported into Italy. The tin glaze was known in Italy in the thirteenth century. The secret of its composition was at first restricted to a limited area, Bologna, Perugia, Siena, Faenza, Forli, Rimini, Pesaro, Cataggiolo, Urbino, Castel, Durante, Gubbio. It was only later, in the sixteenth and seventeenth centuries, that it spread to Venice, Genoa, Savona and Southern Italy.



III.—Italian Pottery: Decorating. [*Copyright Photo., Argus, Milan.*

Fourth, lustred majolica ware is the most beautiful of all Italian ceramics, and the one that the modern Italian potters take their inspiration from, and are trying to revive in all its former splendour. This ware was made at Gubbio, Faenza, and Siena at the end of the fifteenth century. The lustre process was abandoned in the middle of the sixteenth century, because it entailed a very considerable risk of destroying an article which may have taken weeks of careful workmanship in its decoration.

Piccol Passo, writing on this subject, says: "Frequently only six pieces were good out of a hundred." It is therefore easy to understand why this beautiful nacreous iridescent finish was relegated to inferior wares.

The Gubbio lustre as found in the works of Mastro Giorgio is distinguishable from any other on account of its ruby-red colour. The first colours used in the lustre ware were manganese-purple and transparent copper-green; then cobalt blue, and later strong yellow antimoniate of lead mixed with iron. Spirals, scrolls, arabesques, dots, all formed part of the designs, as well as conventional flowers and Persian and Moorish subjects. Figures, human and animal, followed; but only in the sixteenth century, when distinctive Italian designs were used, the vases were made to display the figure subjects.

The Tuscan-Italian pottery was the most beautiful. It had patterns of floral scrolls and peacocks' feathers. A collection of perfect examples of this ware are on view at the Victoria and Albert Museum.

The great Florentine sculptor Luca della Robbia (1399-1482) was followed by Andrea and Giovanni della Robbia in making typical enamelled terra-cottas. He excelled in the sculptorial department of the potters' art, but his wonderful complex designs gave way in the sixteenth century to simple conventional patterns. The experts found fault with the minuteness and elaborateness of



[*Copyright Photo., Argus, Milan.*

IV.—Italian Pottery: Spraying.

the former designs, as they considered them more suitable for fresco painting than enamelled clay. It must, however, be taken into consideration that this industry was, at the time, patronised by the ruling Italian noble families, and the costly lustred wares of Gubbio were probably especially made as wall decorations, as is proved by the fact that some of the most beautiful plates classified as "Piatti di Pompa," have rim-pieces for suspending them, and they never were meant to be put to practical use, even for the tables of the wealthy.

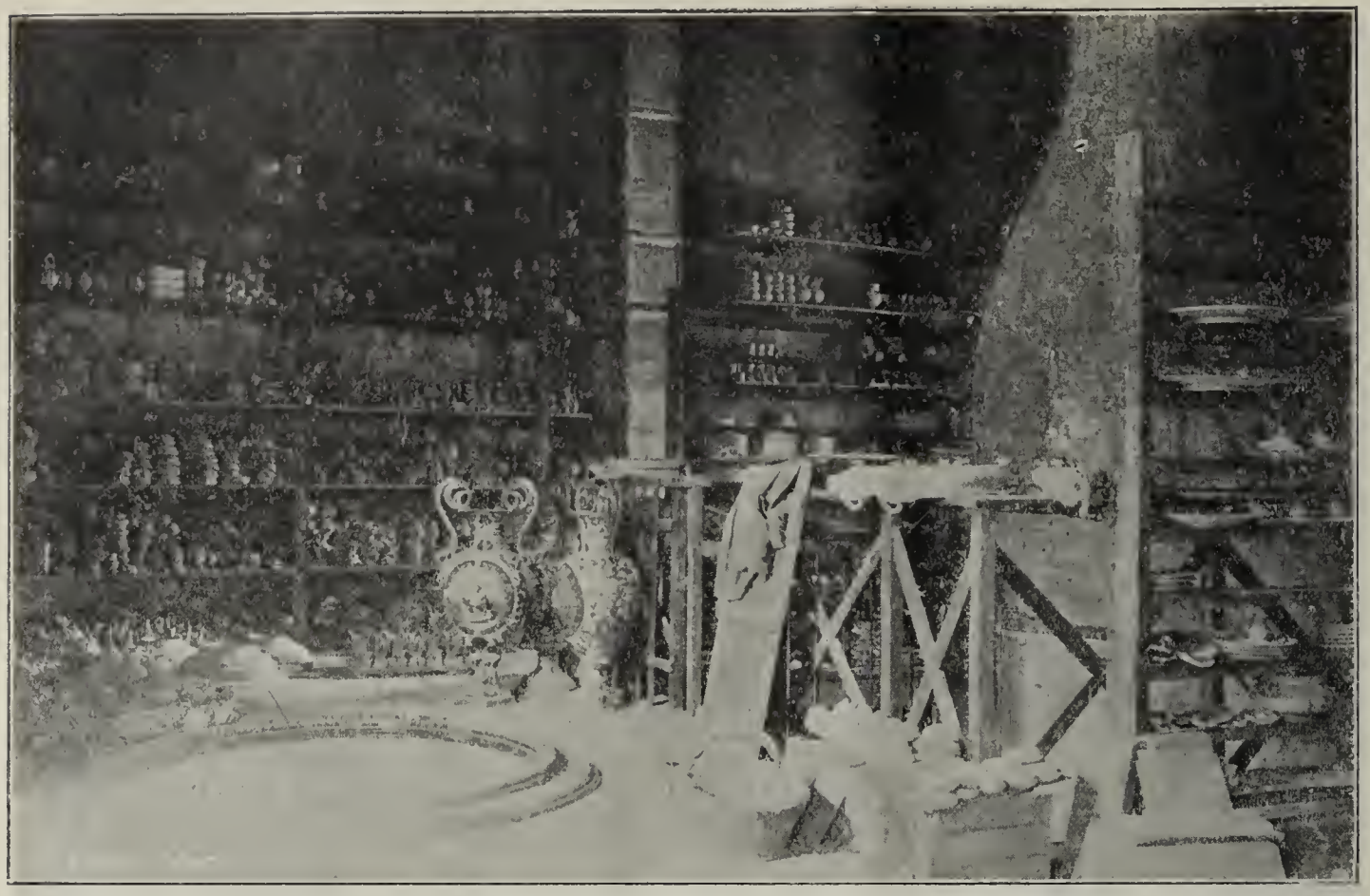
The Faenza ware had pictorial motifs, and in the workshops of Siena grotesques and arabesques were introduced on a brownish-yellow or a black background The grotesque decorations were carried out also at Subbio, and the designs known as "A Candelieri" and "A Trofei" developed from this style.

The potters of the time, when executing orders of wares meant to be presented to any one particular person as birthday or other gifts, inscribed a suitable motto on the article ; for instance, on a plate meant for one called Francesco they wrote : "Mangia, Francesco" (Eat, Francesco), and on a cup intended for the same person they inscribed : "Bevi, Francesco" (Drink, Francesco).

Urbino style had scenes taken from romance, history, scripture, and mythology, with landscapes as backgrounds. These wares were called "Istoriati," (1530-1560).

In the seventeenth century styles changed, but the potter's art was in full decline, as princes had withdrawn their valuable patronage.

In Venice black ware with gilt decorations and white ware with scallops and gadroons became fashionable. In the eighteenth century enamel painting was carried out over the glaze, but the pottery was in no way characteristically Italian. In this century a revival in pottery began in Italy, and in the recent exhibition in Rome in the Padiclione delle Marche, the art of Mastro Giorgio could be admired, the full process of manufacture and decoration of the pottery being carried out before the visitors' eyes ; the working of the majolica ware being done by Pesarese potters.



[*Copyright Photo., Argus, Milan.*

V.—Italian Pottery : Samples in Warehouse.

The photographs reproduced will give an idea of it.

Fig. 1 shows the actual workshop, where one can see the potters at work, shaping the clay with their hands, aided only by a foot wheel.

Fig. 2. After the pottery has been slightly baked it is dipped in tanks containing a special liquid, which gives them a strong and non-porous coating. Observe the use of the dipping tongs, which prevent the worker's hand from coming in contact with the composition.

In Fig. 3 the pottery has passed into the hands of able painters and decorators, who reproduce with special colours on the plain surface, pictures, scrolls, and designs of all kinds ; then a workman with a special apparatus sprinkles on the finished article (Fig. 4) a substance that gives it a brilliant crystalline appearance ; after which the pottery is placed in an oven until it is perfectly dry. The spraying, it will be noticed, is performed in a special chamber fitted with a suction pipe to prevent the workman from inhaling poisonous dust.



[*Copyright Photo., Argus, Milan.*

VI.—Italian Pottery : A Jardinière.

Fig. 5 shows a collection of pottery in the most typical old shapes—bowls (scodelle), jugs (boccali), dishes of various sizes (bacili tondint), plates (piatti or taglieri), saucers (piatteli), cups (tazze), fruit holders (fruttieri), drug vases (albarello), drinking bowls (ongaresca), the largetypically ornamental vases (vasi ornamentali), &c.

There is no end to the variety of articles done in pottery.

Fig. 6 shows a fine specimen of a jardinière, the stand as well as the bowl in which the plant is placed being in pottery; the design is a very effective one. Fig. 7 shows a workman taking the frame of a mantelshelf out of a mould.



[*Copyright Photo., Argus, Milan.*

VII.—Italian Pottery: Moulding Architectural Ware.

It is to be hoped that the effort which is being made in Italy to revive the potter's art, which seemed for a while to have worn itself out, will be successful in bringing into the industry the beauty which made it famous in olden times.

THE CHINA AND GLASS DEALERS' ASSOCIATION OF THE UNITED KINGDOM.

OFFICIAL REPORT.

A COMMITTEE meeting was held at the Golden Lion Hotel, Leeds, on Wednesday, Feb. 19. Mr. S. Hirst (President) was in the chair. Apologies for absence were received from members in Manchester, York, Newcastle, Hull, Derby, Northampton, Leeds, &c.

Mr. W. Neaverson (Hon. Secretary) gave a report of the visit of the dealers' deputation to the Manufacturers' Associations last November, the object of which was to ask manufacturers to include straw, packing charges, and advances in the invoice price of goods. The manufacturers were to hold a meeting early in January to consider this and other matters, but up to the present their joint decision, if arrived at, had not been communicated to him. He was pleased to report, however, that six manufacturers had of their own initiative, adopted the suggestion of the Dealers' Association, and were now invoicing goods at prices which included all the usual foot of invoice additions (plusage, straw, and packing charge),except crates, for which full price was to be allowed on return. He also informed the meeting that 21 new members had joined the Association as a direct result of the success of this deputation.

The committee, in thanking the deputation, congratulated them on the outcome of their efforts, and expressed their pleasure at the very friendly and hospitable reception which the manufacturers had accorded them.

The President (Mr. S. Hirst) replied, and said it was the intention of the Association not to let the matter drop, but to keep hammering away until every manufacturer had fallen into line, a result which he believed would be as much to their own benefit as to that of the dealers.

The Honorary Secretary was instructed to write the Earthenware and China Manufacturers' Associations to find out if any further action was to be taken in the matter. It was also resolved to advertise in The Pottery Gazette, in order to make the objects of the Association more widely known.

Two railway claims by members were brought under notice, and the Secretary was asked to take them up on behalf of the Association with a view to getting a settlement.

Other matters brought forward by members having been debated, a vote of thanks to the Chairman closed a successful and satisfactory meeting.

New Trade Marks

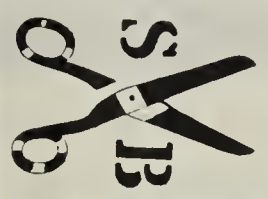
FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Mark must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.



347,141. All goods included in Class 16. F. W. Hayne & Co., 80, Bishopsgate, E.C.

PYROFLEX. 347,893. Glass gas shades for deflecting light towards the ceiling. Class 15. S. Reich & Co., 15, Clerkenwell-road, E.C.



348,674. All goods included in Class 15. Spicer Bros., Ltd., 19, New Bridge-st., E.C.

MAGNESOLIT. 348,014. Porcelain and earthenware articles for insulating parts of electric appliances and gas lamps. Class 15. Ernst Hildebrandt, Ltd., Ravensbury-road, Earlsfield, S.W.



347,404. Lamp glasses. Class 15. Patterson & Co., 40-44, Trafalgar-st., Newcastle-on-Tyne.



348,300. All electrical goods included in Class 16. Voigt & Haeffner (England), Ltd., 95, Colmore-row, Birmingham.

A DUTCH POTTERY DEALER.

(SPECIALLY CONTRIBUTED.)

NOWHERE on the Continent does an Englishman feel more at home than in Holland. Max O'Rell's saying that Continental customs and practices are not better and not worse than English, but only different, is less applicable to Holland than to any other country on the mainland. Yet in Holland, too, there are habits and customs different from our own, and this comes out very often in the displays made in the shops and ware-rooms. This train of thought was strengthened as I recently passed through the magnificent showrooms of Mr. C. Hoyng at Amsterdam.

Amsterdam is a most interesting place architecturally, historically, or commercially, from an English or from a European point of view. It is a town that is living and throbbing with an earnest determination to maintain its old and illustrious position amongst the great cities of the world. This is clearly seen and may be strongly felt by anyone who spends an hour or two in its famous street—Kalverstraat—where the surging, eddying, bustling crowd is ever busily going to and fro. Amongst the many palaces of commerce in the famous old thoroughfare none is more imposing or more worthy of attention than the splendid edifice already mentioned, Mr. C. Hoyng's. The business was founded some thirty years ago by the late Mr. Hoyng, and now has large sister establishments in the Hague, Utrecht, and (in summer) at Scheveningen. Beginning in a comparatively humble way, making a speciality—let me say in passing—of supplying excellent cheap ware for cooking, the firm has grown until it touches nearly every branch of house requisite, useful or ornamental. At Amsterdam the Kalverstraat front is remarkable for the choice and artistic wares displayed—let it be observed, not only china and earthenware, but hardware of every kind. Four splendid rooms are devoted to this : two on the ground floor, and two upstairs ; in addition there are large and well-appointed packing rooms, and rooms for the storing of their general stock. Like all living and progressing concerns, they make a speciality of certain goods.

Holland is now, as it has been for long, the home of very beautiful artistic wares : wares distinguished by a charm of line and special delicacy of decoration, that makes them at once artistic and national. He who has once seen a collection of these wares will recognise them as Dutch anywhere ! One decoration, called "Rhodian," is of rich dark colouring, suggested doubtless by Persian ware, but of a style all its own. There is also a style of decoration in matt glaze, a cream ground with faint underglaze colours showing through ; this, too, is very beautiful. Tea and dinner sets delicately painted are also a feature. The Queen of Holland recently purchased a dinner set of ware painted in underglaze blue. Very beautiful underglaze sea-scapes and animal subjects are on show, making one of the finest displays of art ware to be seen. All these wares are made at Gouda by the Zuid Holland Pottery Co., in which Messrs. Hoyng are interested.

Pottery does not exhaust the art goods on sale ; very striking and beautiful brass wares, reproductions of brass articles used formerly, are a feature. Milk cans, fire bracket braziers, now reproduced and suited to become



MR. C. HOYNG'S SHOP AT AMSTERDAM.

flowerpot covers, strike the eye of the wanderer through the rooms.

Crystal glass figures to a much larger extent on Dutch tables than it does in England. Cheese covers, biscuit barrels, cake dishes in this ware are apparently the pride of the Dutch housewife, for they are to be seen in many and expensive forms at Messrs. Hoyng's. It has rarely been the writer's lot to see a Dutch breakfast table on which glass in many forms was not prominent!

Messrs. Hoyng's also display bronze and marble statuettes, the beautiful electro-plate of Christofle, woodwork clocks, electric lamps, all of high class. Space forbids mentioning in detail the many "lines" on view. But one line must not be overlooked. Dutch ladies evidently take great pride in their kitchens, the result being a splendid display of decorated kitchen utensils, especially in earthenware. These articles we know little of in England. How seldom at home could you find a tastefully decorated porcelain rolling pin or jars for salt, sugar, dried herbs, rice, &c., all decorated in a neat and clean pattern, and bearing the name of the contents carefully worked in underglaze on the outside. Yet no middle-class Dutch or German housewife is content without these necessary articles.

One striking work I had nearly omitted—a full-size copy on tiles in underglaze painting of Rembrandt's "Night Watch." The copy is a splendid success, and is valued at 800 florins (£66). Anyone travelling in Holland next summer who visits either Amsterdam, the Hague, Utrecht, or Scheveningen cannot spend an hour more pleasantly than visiting the capacious showrooms of Mr. Hoyng.

THE ENGLISH CHINA MANUFACTURERS' ASSOCIATION.

OFFICIAL REPORT.

THE general meeting of the English China Manufacturers' Association was held at the Crown and Anchor Hotel, on Wednesday, Jan. 29, when there was a good attendance of members. A vote of condolence was passed to the family of the late Mr. F. J. Radford, a member of the Association. The accounts were passed for the expired year, and a financial statement made by the Hon. Treasurer. Records of attendances at committee and general meetings were read. Mr. H. J. Colclough was unanimously elected president for the ensuing year, after a cordial vote of thanks had been passed to Mr. F. H. Heath, who had occupied the presidential chair for the last three years. Messrs. S. L. Plant and Thomas Poole were elected vice-presidents. Mr. A. B. Jones, Jun., was re-elected hon. treasurer, and the following gentlemen were elected on the Committee:—Messrs. J. G. Aynsley, F. Williamson, J. W. Bewick, J. Goodwin, R. Hawley, J. Hewitt, Robert Kent, W. P. Moreton, F. H. Heath, R. T. Schofield, T. C. Wild. S. Wilson, and — Nixon.

The new President was nominated as a representative director of the Potters' Insurance Co. The retiring auditors, Messrs. Tom Blair and W. T. Kent, were re-elected. Representatives on the Joint Association of the Allied Pottery Trades were appointed as under:—Messrs. the President, with J. G. Aynsley, F. Williamson, F. H. Heath, and Thomas Poole. Representatives on the Committee to be formed in place of the Education Advisory Committee were appointed, viz.:—Messrs. A. B. Jones, jun., and S. Wilson.

Considerable time was devoted to the question of selling prices, and the general opinion was that a closer agreement for rigid maintenance was inevitable, and the necessary preliminary steps were taken to secure that end by the appointment of a special sub-committee, with full powers to take such steps as might be considered necessary.

COMPOSITION OF PORCELAIN BODIES AND GLAZES.*

HARD PORCELAINS.—The body consists of kaolin (clay), quartz, felspar, felspathic rocks; sometimes with a little lime (chalk, calc spar), more rarely magnesia.

(1) Sèvres, Meissen, and Viennese Porcelain.—0·3–0·35RO . Al_2O_3 . 2·8–3·5SiO_2.

(2) Best Limoges and Vierzon Porcelain.—0·36–0·45RO . Al_2O_3 . 4·8–5·3SiO_2.

(3) Oriental Porcelain and Imitations.—(a) Japanese: 0·3–0·4RO . Al_2O_3 . 6·2–7·4SiO_2. (b) Seger: 0·36RO . Al_2O_3 . 8·55SiO_2. (c) China: 0·4–0·45RO . Al_2O_3 . 5·5–6SiO_2. (d) Sèvres: 0·37RO . Al_2O_3 . 5·15SiO_2.

(4) Heavy Limoges and Vierzon Porcelains: Hal, Berlin, and Karlsbad Porcelains.—0·2–0·3RO . Al_2O_3 . 4·2–4·8SiO_2.

(5) Thuringian.—0·08–0·1RO . Al_2O_3 . 3·9–5·8SiO_2.

Glazes:—	RO.	R_2O_3.	SiO_2.
Berlin	1	1	8·91–10
Sèvres	1	1·07	7·45
Limoges ..	1	1·12–1·24	9·58–10·84
Thuringia..	1	0·6–0·8	4·7–6·3
Japan	1	0·41–0·55–0·59	3·66–4·42–5·04
China	1	0·58	4·57
Sèvres	1	0·5	4·21
Seger.....	1	0·5	4

Soft Porcelain.—The body consists in many cases of the same raw materials as hard porcelain, but mostly receives an addition of, in part, artificial fluxes (fritts) in place of the usual fluxes for hard porcelain.

Bone Porcelain.—Body consists of china clay, blue clay, Cornish stone, flint, with an addition of bone ash:—

1·15–8·33RO . Al_2O_3 . 1·97–9·08SiO_2 . 0·35–2·67P_2O_5.

Glaze.—Alkali-lead-boric acid glazes as for stoneware, e.g.:—

RO . 0·9Al_2O_3 . 1·9 SiO_2 . 0·4 B_2O_3.
RO . 0·2Al_2O_3 . 2·10SiO_2 . 0·25B_2O_3.

Fritt Porcelain.—Body, alkali-silicate fritt with chalk and marl or sand and kaolin. French fritt porcelain:—

14·3RO . Al_2O_3 . 50SiO_2; or
11·1RO . Al_2O_3 . 51·33SiO_2.

Glaze.—0·31–0·24K_2O . 0·23–0·25Na_2O . 0·46–0·51PbO . 1·72–1·86SiO_2.

Fritt Porcelain according to Heinecke.—0·33–0·5RO . Al_2O_3 . 6–12SiO_2 . RO = K_2O; CaO 1 : 2 or 1 : 3. Glaze: Readily fusible lead glaze.—

U.S. Glass Imports and Exports.—During the twelve months ending Dec. 31, 1912, 405,420 boxes of window glass were imported into the U.S.A., the value being $967,534. The imports during the corresponding months of 1911 amounted to 442,014 boxes, valued at $902,916. The imports of polished plate glass during last year were 1,001,332 sq. ft., costing $260,568. The imports during 1911 were 2,254,851 sq. ft., valued at $526,859. The values for other branches of the glass industry are as follows, the figures for 1911 being given first:—Bottles, &c., plain, $915,159, $880,328; bottles, &c., ornamented, $1,237,185, $946,602; optical instruments, dutiable (since July 1, 1912), $291,960, $649,956; optical instruments, free, $316,809, $444,995; all other, $2,239,110, $2,152,641; total, $6,429,998, $6,302,624. The exports during 1912 and 1911 were as follows:—Bottles, &c., —, $374,931; common window glass, $166,679, $274,031; plate glass, $46,328, $71,685; all other, $3,132,136, $3,186,848; total, $3,345,143, $3,907,495.

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* Specially translated from the "Sprechsaal Kalendar."

A FEW CHINA SHOPS IN SOMERSET AND NORTH DEVON.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

(*Concluded from page* 171.)

ILFRACOMBE—(*continued*).

MR. WILLIAM COLE has an attractive shop in a good position in High-street, the principal thoroughfare in the town. It is appropriately called "The Corner House," and is one of the most popular places of business in Ilfracombe. Mr. Cole is a general provider, which is a fairly accurate description of a miscellaneous business, though it does not include several departments that are usually found in what are termed "Stores." The building itself is extensive, and "wedge"-shaped—what is called in America a "flat iron" one—and has a good corner frontage and extensive windows on each of the two sides. There are many departments, all well stocked, and occupying five large floors, with ample store-rooms below and packing rooms in the rear. Mr. Cole is a keen business man, and, though I was not told so, it was easy to infer that whatever the business was at the beginning it has become what it is through Mr. Cole's ready perception of what the town and neighbourhood required. I had an opportunity of going through the other departments, but I propose only to speak of his extensive business in pottery, glass and fancy goods. This fills the whole of the large first floor. and makes an unusually attractive display. The department is controlled by a lady, under the personal supervision of Mr. Cole himself. I am inclined to think, from what I saw, that the necessity for his interference very seldom arises. However this may be, Mr. Cole is to be congratulated on the skilful arrangement of his goods, in the show-rooms and in the windows. The lady has a good idea of what coustitutes an effective display, and is not content to tell her assistants how it should be made, but at the time of my visit was arranging one of the windows herself. We give an illustration of this large sample-room, reproduced from a photograph taken expressly for us. It was taken in the dark days of December, and by the aid of a flashlight, so that the parts of the room distant from the camera are not very distinct. The excellent arrangement of the large stands (with the ample floor space between them) is, however, plainly seen. The effect is enhanced by the good window light from all sides. There is a varied assortment of all kinds of useful pottery and glass for household purposes, mostly of the good medium descriptions, but with examples of the best. Fancy goods, both Continental and British productions, are strong features of the stock, many of them serving as souvenirs for visitors. Mr. Cole buys largely, and with that advantage he claims to sell all goods in our lines at London store prices. He is also a cabinet-maker, ironmonger, and complete house furnisher, and has a branch shop at Woolacombe. He aims at supplying from stock any article that is asked for, to use his own words, "from a penny mug to a ten-guinea vase, and from a box of tacks to the complete furnishing of a house." His business, however, does not absorb all his energies, for I am informed he is a popular public man, taking an active interest in every movement that has for its object the good of the town. In this connection he occupies several important positions. For instance, he is chairman of the Cottage Hospital Saturday Fund, hon. secretary of the Ilfracombe Lifeboat Committee, and was at one time chairman of the Ilfracombe Council. He takes an active interest in politics, and, as a Conservative of the old school, he has done much to further the interests of that party in the town. He is another example of the advantages a distributor has in a thorough knowledge of the production of the goods he deals in. For some years he was a partner in the Exeter Art Pottery Co., and is therefore well acquainted with every detail of the manufacture, from the time the rough clay is brought into the puddling house



MR. WM. COLE'S SHOWROOMS: ILFRACOMBE.

to be fined, to the time when, having passed through the many and varied operations, it is placed in the sale-room, a finished article.

Twiss Brothers, The Arcade, Ilfracombe, have a large range of premises in what is a busy market area in the season. The Arcade is much frequented by visitors, and the tradesmen who have shops in it cater especially for them. Twiss Brothers have several shops there, and though it was mid-winter when I called, they had a large assortment of fancy and useful goods for presents nicely displayed. The firm have about a dozen departments, but not any furniture or clothing. Cutlery, plated goods, and a good variety of pottery and glass of all qualities go to make up their large stock. In pottery they keep the productions of some of the best makers, including such houses as Worcester Porcelain Co., Coalport, Wedgwood, and others. They make a good show with Devonshire pottery for presents, and of heraldic china with local arms and crests. Some dealers in fancy lines close their shops during the winter months, but Twiss Brothers have a regular as well as a casual trade, and if they are not exactly busy all the time, they do not close their shops.

J. Pugsley & Sons, Worcester House, High-street, Ilfracombe, are complete house furnishers, ironmongers, and china, glass, and earthenware merchants. Their premises include a number of shops, each with its separate entrance from High-street, but all communicating internally. They carry on each branch of their many-sided business in a shop given up to it entirely, and each with its separate window. The glass and china window is well arranged, and at the time of my visit it was specially dressed for Christmas, with a choice assortment of goods suitable for presents, including the latest novelties. The window space for our goods is somewhat limited, but the articles shown are fully representative of their large stock of useful and ornamental household and personal requisites. They claim to provide everything in pottery and glass for the average householder. In addition to their front shop they have an interesting showroom in the rear that is unique in its arrangement. In the centre of this room there is a large old-fashioned loo table, which does duty as a stand, and has a number of quaint pieces of pottery arranged on it. The gentleman I saw was evidently a practical business man, who understood the requirements of the public. He shows a number of specialities, and is the sole local agent for Goss heraldic china. He promised to send us a photograph of his "drawing-room-like" showroom, but it has not arrived. We should have been pleased to give an illustration of this dainty method of showing artistic pottery and glass ware.

BIDEFORD

has a population numbering less than 10,000, but it is a town of very considerable interest, with many pleasing features. For centuries it was famous for its bridge and its market, and though it has seen many changes, and has declined as a business centre, the bridge and market are still attractive to visitors. Such prosperity as the town enjoyed was due to its trade with the then New World, and on this it flourished till the wars of the eighteenth century, when its merchants sustained losses which have never been repaired. My interest in Bideford centred round Charles Kingsley's "Westward Ho," and possibly most of my readers have been similarly influenced. Charles Kingsley rediscovered Bideford, and the residents and thousands of visitors have benefited by the discovery. I spent but a short time in the town, but I devoted part of it to a visit to the statue by which the public expressed their gratitude to the man who gave new life to the town. Bideford is pleasantly situated on the river Torridge, and has some good if rather irregular streets, and is fairly well supplied with retail shops.

Bale & Son, High-street, are wholesale and retail china, glass, and earthenware merchants, with two shops. The business has been established for a century, and covers all departments in our trades, though the stock consists mainly of good medium class useful requisites. The shop was at the time of my visit under the care of a lady, owing to the illness of her brother, so that I saw it under somewhat unfavourable conditions. Glass and pottery, with cutlery, are let out on hire for festivities, and glass and china riveting are undertaken.

G. Hopson & Son, 23, Mill-street, are glass, china, and hardware merchants. They have been long established as furniture dealers, the pottery and glass trades having been added. Mill-street is a busy retail thoroughfare, and a brisk market trade is done. All the usual household requisites are stocked in great variety. Residents in the villages and country district for many miles round visit Bideford regularly on market days, and it is upon them that retail dealers depend mostly for their trade. Pottery and glass for domestic use are stocked to a small extent by many dealers in other goods, while drapers and others keep small quantities of fancy lines. It is possible there may be other china dealers, whose shops I did not see. If there are any I regret the omission, and can only assure the proprietors it was not intentional.

Mr. S. J. Barber, Regent House, Regent-street, Weston-super-Mare, has one of the oldest china, glass, and earthenware warehouses in the town, and he keeps a good selection in all branches of our trades. He provides for all tastes in china, tea, and breakfast sets, plain and decorated; morning sets, afternoon sets, and dessert services, dinner and toilet sets in many patterns and at all prices. Suites of table glass and loose tumblers, wines, dishes, jugs, &c., in great variety. He makes a special display of glass for decoration, such as vases, flower stands and épergnes; and useful goods like cake stands, comports, and globes and shades for gas and electric lighting purposes. Useful household goods, such as stoneware, stew pots, pans and flower pots, and French fireproof ware are included in his stock. Mr. Barber lets china and glass on hire, and undertakes china repairs in all branches.

Special Rules for Potteries.—In the House of Commons on Feb. 12 Mr. Hills asked whether the new rules for lead processes in the Potteries are now in force; if not, when they will be in force. In a written reply Mr. McKenna stated that the regulations for the manufacture and decorations of pottery were made on Jan. 2, and were now in force. The forms and instructions for carrying out the regulations were now in the printer's hands, and would be issued to occupiers as soon as possible.

Old Porcelain.—At a sale of porcelain by Puttick & Simpson at their rooms in Leicester-square on Feb. 7 the following prices were realised:—Lambeth Delft Sack jug, dated 1647, £15 15s.; a Spode plate painted with view of Herne Bay, £6; a similar plate with view of Brighton, £6; a Spode vase painted with flowers, £16 16s.; a Chamberlain vase with flower decorations, £7 17s. 6d.; a pair with bird decorations, £17 17s.; a set of three Flight and Barr vases, £16 16s.; a Swansea plate painted with flowers, £11 11s.; a Nantgarw plate with similar decoration, £7 17s. 6d.; a Nantgarw dish painted with roses, £14 14s.; and a Rockingham fruit stand, £7 7s.



THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

By One of Our Staff.

(*Continued from page* 175.)

XI.—THOMAS WALLIS & CO., Ltd., Holborn Circus, E.C.

OF all the great retail distributing houses in the metropolis one of the most popular is that now controlled by Thomas Wallis & Co., Ltd., in the very heart of the City. There are other houses that are justly famous, but I use the word "popular" in connection with Wallis & Co. as expressive of "pleasing to the people." The secret of the rapid development of this business has been without doubt the outcome of the object aimed at and constantly pursued by the founder of it, the late Mr. Charles Meeking. When he had but one shop on what was then Holborn-hill. he made it his policy to give the public all the advantages he could in the way of prices. He was a judicious buyer, and when, as often happened, he had the opportunity of acquiring goods on exceptional terms, he took advantage of it, and was thus able to attract the buying public. The temporary premises he occupied during the construction of the Holborn Viaduct became a recognised market for drapery and soft goods generally, and those who studied economy invariably found what they wanted at "Meeking's." Charles Meeking believed in publicity, and when he had special bargains he filled his windows with attractive goods at a reasonable profit on what he gave for them. It was by these means that the small draper's shop grew into the gigantic stores which to-day supplies practically everything required in or about a house. Thomas Wallis & Co. pursue the same policy to-day, and in every department of their many-sided business. They are noted for the "bargains" they systematically submit to the public. The company have now a vast organisation divided into a number of "stores," or departments, under separate capable heads, who are given every facility for the conduct of their severa sections. All are subject to the supervision of the board of directors, so that while each is really a separate shop the whole business is one.

Drapery, furniture, ironmongery, pottery and glass are amongst the branches of trade carried on at Wallis's. The business has been built up from within and without by keeping in touch with customers already secured, and by constantly making new ones. It is the same in all departments, but my duty just now is to speak only of the pottery and glass sections. These divisions are very complete, as fully equipped as they could be, in separate establishments. The buyer of the china department has had a lifelong experience in the trade, and is well acquainted with the requirements of the public. He has his stock attractively displayed and the arrangement of it frequently changed. They have several windows showing our goods. One of our illustrations shows a section of the frontage to Holborn, in which there is always something new or exceptionally cheap in table-ware and pottery generally. It will be seen that just now prominence is given to a number of new shapes and decorations in toilet ware and dinner ware. There is another and larger window



China Department of Thos. Wallis & Co., Ltd. [*Photo. by "The Pottery Gazette."*

display of pottery and glass fronting Bartlett's-buildings, but these are altogether eclipsed by the splendid china department on the first floor. We give an illustration of this long and well-arranged showroom, and congratulate the company on the artistic arrangement of this well lighted gallery. This is a reproduction of a photograph taken by our own photographer, and if not one of the largest, is one of the most pleasing china departments in London, and reflects great credit upon Mr. Tugwell, the buyer in charge of it. At the time of our visit ornamental goods were very prominently shown, but the stock includes all grades of dinner ware, toilet ware, tea and breakfast ware, table glass in suites, and glass for all domestic purposes in abundance, from all the medium up to the highest grades. The most choice English cut and engraved glassware and the productions of the most celebrated china manufacturers in the world are well in evidence, while in the equally useful but less expensive varieties the wants of the more frugal customer are fully provided for. The company remain true to the policy adopted since 1826 in giving the best "value for money." As an illustration of this, they are issuing a well illustrated price list of glass goods, of which they have made extensive purchases. They keep the public well in touch with the special lines they have to offer, and issue separate catalogues of furniture, bedsteads, cutlery, ironmongery, drapery, pottery and glassware.



[*Photo. by "The Pottery Gazette."*

THOMAS WALLIS & CO., LTD., HOLBORN, E.C.

Belgian Glass Exports during last year comprised :—Window glass, 2,182,726 metric tons ; plate glass, 414,512 metric tons; other glass and glassware, 433,335 metric tons. The only decrease appears under "Plate Glass."

Wax Preparations. — Wax for Edging Metal Plates for Etching. —Yellow wax 500 parts, beef tallow 300, rosin 900 parts, melted together at a gentle heat.——Majolica Wax Preparations.—(1) A solution of 2¼ lbs. of pale rosin in 1¾ pints of pine oil. (2) Equal parts of wax and tallow melted together. (3) Wax dissolved in an equal weight of oil of turpentine at a gentle heat. (4) Cercsine 2 parts and paraffin wax 1 part, melted at gentle heat and mixed with oil of turpentine 3 parts.——Modelling Waxes. — (1) White wax 1 part, yellow wax 2, lard ½ part, melted together and incorporated with up to 2 parts of fine red oxide of iron, then strained through a sieve, and kneaded when cold. (2) Levigated clay 13 parts, wax 7, olein 33, zinc oxide 5, flowers of sulphur 28, olive oil 14 parts. The olein is warmed with the zinc oxide until a soap is formed, whereupon the olive oil and wax (melted together) are stirred in, followed by the clay and the flowers of sulphur. — Specially translated from the "Sprechsaal Kalender."

THE POTTERY AND GLASS TRADES' BENEVOLENT INSTITUTION.

(BY OUR OWN REPORTER.)

THE thirty-first annual general meeting of the Pottery and Glass Trades Benevolent Institution was held at the First Avenue Hotel, Holborn, London, W.C., on Jan. 28. The report of the Board of Management and the balance-sheet were given in our last issue. In the unavoidable absence of the President (the Rt. Hon. the Earl of Harrowby), the chair was taken by Mr. J. C. Bailey, J.P. (Doulton & Co., Ltd.). Others present were as follows :—Mr. E. R. Edis (Army and Navy Stores), a Governor ; Mr. W. G. Savill (Ernest Wahliss, 88, Oxford-street, W.), retiring Chairman of Board of Management, and newly elected a Governor ; Mr. W. Rhodes (Keeling & Co., Ltd., Burslem), Vice-chairman of Board ; Mr. G. D. Francis (Stuart & Sons, Ltd., St. Andrew's-street, E.C., deputy, Vice-chairman of Board ; Miss A. Montgomery and Miss R. C. Montgomery : Mr. Chas. E. Green (Green Bros.) ; Mr. Paul Chomette (C. Pillivuyt & Cie), Mr. C. J. Cooper (W. Whiteley's, Ltd.),

Mr. Frank Findlay (Wedgwood & Co., Ltd.), Mr. L. W. Hadley (Worcester Royal Porcelain Co.), Mr. A. Overton Jones (Geo. Jones & Sons, Ltd.), Mr. F. J. Mayer (Henry Mayer & Co., Ltd.), Mr. John Porter (Winkle & Co., Ltd.), Mr. A. R. Prichard (Jas. Green & Nephew, Ltd.), Mr. S. Stanley (C. T. Maling & Sons), Mr. F. Tugwell (Thomas Wallis & Co., Ltd.), Mr. W. W. Wood (Selfridge & Co., Ltd.), Mr. E. Curry (London), Major L. C. Dams (C. J. Dams & Co., Ltd.), Mr. A. E. Hancock (London), Mr. J. Woodcock (London), Mr. J. Charlton (London), Mr. J. Rowland-Rouse (London), Mr. Robert Audley (New Hall Pottery, Hanley), Mr. J. Clark (London), Mr. H. E. Rutter (London), H. Sharman (Birmingham), Mr. W. Thomson (THE POTTERY GAZETTE), Mr. T. Rathbone (Newfield pottery, Tunstall), J. D. Hodgkinson (Longport), Mr. S. Johnson (Hill Pottery, Burslem), Mr. E. T. Tullett, (London), Mr. Felton Wreford (London), Mr. F. E. Spiers (London), Mr. S. Stent (London), Mr. Robert Bax (London), Mr. J. S. Lewis (London), Mr. S. G. Spriggs (London), Mr. A. J. Dale (London), Mr. W. J. Miller (London), Mr. J. Walter (London), Mr. J. T. Bourne (Doulton & Co., Ltd., London), Mr. J. Blackburn (London), Mr. E. P. Evans, J.P. (Worcester), Mr. T. W. Esland (Harlesden), Mr. A. Reeves (East Finchley), and Mr. Harry Davies (Longton), with the Secretary, Mr. J. G. W. James.

Letters of regret were received from the following gentlemen who were unable to attend :—Lord Harrowby, Mr. R. D. Doulton, Mr. Edmund Leigh, J.P., Mr. W. H. Stuart, J.P., Mr. Congreve Jackson, Mr. John Brock, Jun., Mr. O. M. Doulton, Mr. H. Spencer Daniell, Mr. B. M. Cook (the solicitor), Mr. John Jenkins, Mr. Jules Wuidart, Mr. S. M. Stuart, Mr. Robert Stuart, Mr. E. Sanderson, Mr. J. E. Heath, Mr. J. Adams, Mr. Dunbar F. W. Bishop, Mr. J. S. Williams-Thomas, J.P., Mr. J. Lockett, Mr. Frank Lockett, Mr. H. T. Cheeseman, Mr. S. N. Jenkinson, Mr. Robert Shenton, Mr. Fred Williamson, Mr. George Coles, Mr. J. T. Mogridge, Mr. Basil Hallett (auditor), Mr. Edgar Greenwood (THE POTTERY GAZETTE), Mr. R. C. Lampard, and Mr. J. A. Wood.

The minutes of the last general meeting having been read and confirmed, the Chairman addressed the members. He was sure they all felt with him a very special regret at the absence of their noble President, Lord Harrowby. He was sure that had it been possible their President would have been with them that evening. Personally the speaker felt much honoured at being asked to take the place of their President, though it was an honour he had accepted with some misgiving, but the letter he received inviting him to take the chair was of such a nature that it would have been an ungraceful action had he refused to act upon it. His hearers would, therefore, blame those responsible for his presence and not himself if there were any shortcoming on his part. He had been indebted to their Secretary for an opportunity of reading the remarks of their noble President last year. The first thing that struck him was the extraordinary pains Lord Harrowby must have taken to make himself thoroughly acquainted with all the details of the Institution and its objects. That he had made himself thoroughly conversant with these details they knew. In the first place they would remember how Lord Harrowby impressed upon them that they must increase the number of subscribing members. Well, the speaker thought he had to congratulate most heartily the Board and the district committees for the most successful way in which they had realised their noble President's wishes. He saw from the income and expenditure account that the amount received from annual subscriptions had increased by no less an amount than 30 per cent. This, he was told, consisted of subscribing firms, which was a very important matter, because firms, he thought, did not very often draw upon the funds. On the other hand, as indicated might be the case by Lord Harrowby, there had been a slight falling off in donations. If they thought for a minute they might remember that their President had intimated that donations might be a fluctuating amount, being a matter over which the Board or members could have no sort of control. He found they received in 1911, 23 per cent. more than in 1912. But it still was a subject of great satisfaction that they received no less than £708 from donations and gifts last year, and that amount, he believed, with the exception of 1911, constituted a record for donations. He would also like to point out that the amount received in donations almost doubled the amount of the total expenditure on what the Americans would call "running their institution"; so that not only was not a penny of any subscription touched for management expenses, but a considerable amount had been added to the funds of the institution from donations alone. There was, of course, still a very large field to be ploughed yet, and he referred particularly in saying that to the retailers and distributors of china-ware throughout the country. In one of the reports it was stated that there were eleven thousand retail dealers, but that was news to him, and he was rather inclined to doubt that they were so numerous. It would, to his mind, be a mistake to reckon on eleven thousand, unless they took into account those in small country villages. At the same time, if there were only six thousand, he would point out that probably every retail dealer and shopkeeper had one or more assistants eligible for membership of the Institution, so that there was bound to be a good many more than eleven thousand altogether, if only they could get them to join. This matter was being considered by the Board, but if he might throw out a suggestion, he would like to suggest that there was at their disposal the most powerful instrument, in the shape of the Press. There were their friends Scott, Greenwood & Son, of THE POTTERY GAZETTE, as well as the *Staffordshire Sentinel*—he believed there were two papers in the Glass District—and if they could prevail upon those to print a special appeal, and could have those appeals reprinted and sent out round the traders, they would be preparing the ground well for their canvassers and local committees. These appeals could state the amount of subscription, the purposes of the Institution, and refer to the benefits and good work resulting from its operations. It was astonishing what had been done in that way in North Staffordshire district for the infirmary, £17,000 being collected in a very short time. Such an appeal would have an effect which local committees could not possibly have. He saw the Board had been making alterations—steps forward—and they now had their own offices. They knew they were very much indebted to Messrs. Green Bros. for providing free accommodation for so long, and their best thanks were due to that firm for that kindness. Now the time had arrived when they had seen their way to get offices of their own, offices which he considered were excellent, particularly for the price paid for them. There was an excellent room which might be used for any legitimate purpose by any member at any time during business hours, as a club or reading room, or for anything else. He understood they also had a bureau of employment, and though not of large dimensions at the present time, it was a most excellent idea, and ought to be of great service to members who needed employment, or to employers who needed assistants. Another point he would like to refer to here was the departure in the shape of the investments reserve account or, as it was called in the report, the reserve of income account. He understood the object of that account was that, according to their rules, capital investments could not be touched without a lot of "red tape," and quite properly so, and without a special meeting at which the majority in consent had to be three-

quarters of the existing members. The Board, he understood, thought they should have a fund immediately accessible for emergency cases, and in this he agreed with them, and so they invested a small amount as a reserve account, upon which they could draw at any time. It was an excellent idea, and he hoped it would be continued. Now, in conclusion, he could only say that the Institution seemed to have "obtained its second wind, as sportsmen were wont to remark, and he hoped it would go forward and become an Institution worthy of their trade. For himself, he could only say, he wished it every prosperity and success, and that he believed was going to be attained.

Mr. W. G. Savill moved the adoption of the report placed before the meeting, and, having taken it as having been read, he proceeded to state that, although he did not intend going into the report in detail, there were one or two items to which he would wish to refer, if only briefly. As had already been intimated, he considered they had had a fairly good year. They had been successful in many ways, and had made steady and sustained progress, particularly with regard to the membership of the Institution, which had been a very marked feature. They had not had a record year with regard to income, for, as their chairman had said, 1911, the year of the speaker's esteemed predecessor, Mr. Edis, still held the palm in that respect. However, 1912 had been a very good second, and they might easily have done worse, although they also might have done better. Altogether they could look upon the twelve months as very satisfactory. They appreciated the esteemed, continued, and very generous support they had enjoyed not only from manufacturers and the wholesale trade, but also from the retail trade ; and at the festival dinner this year the amount collected reached a very encouraging total indeed. There were two items he would like especially to draw attention to. The first, already touched upon, was the substantial increase in the annual subscriptions—something like £100. This amount he believed was once exceeded, and that was during the jubilee year of 1897, when the total subscription reached £439, as compared with the £424 last year. But in the same jubilee year the donations totalled £680, whereas last year they showed £708, so the aggregate of subscriptions and donations made the receipts even better than those of the jubilee year. At the same time, while the subscriptions had, compared with the previous year, increased, the donations were somewhat down, the difference being to the extent of some £170. This was principally accounted for by the fact that in 1911 there was quite a number of "In Memoriam" donations, a thing which, they would all agree, they could not have always. The supreme endeavour of the Board of Management had been to increase the annual subscribers, a very sensible policy, and one he trusted the new board elected that evening would continue, and do as had been done in the past twelve months. He hoped his hearers would keep that especially in view, for he felt that if they could only increase the annual subscribers, they would remove to a great extent the very natural anxiety of any gentleman who took office in any future year. This would materially decrease the responsibility and anxiety of the Board, and in this direction he was pleased to be able to assure them with absolute confidence that their Institution was in a much more satisfactory condition that day than it had ever been before. There was not the least doubt whatever that that progress would be maintained. The second matter to which he wished especially to refer was on the other side of the account. He was pleased to be able to report that in annuities and relief more was spent in 1912 than in any year previous in the annals of the institution. This was very satisfactory, and he submitted that it constituted a most desirable record, for after all that was the purpose and aim of their existence. To their Board it gave the greatest satisfaction to draw attention to a total of £575 disbursed and £85 given in temporary relief. That amount had been much appreciated, and he could say from personal knowledge that it had provided real genuine help in many cases, and had brought from recipients of relief letters of gratitude and appreciation. He was certain that the members would be convinced that the whole of that money had been wisely and well spent. He did not think it necessary to go into all the details of the report which had been placed before them, but he would emphasise what their chairman had said as to their having taken the new offices ; he would invite those who had not seen them to pay a visit to those offices, and not only inspect the offices but also notice the very handsome and luxurious chair presented to the Institution by the Fragile Club. It was a really handsome and fine piece of furniture, and quite comfortable. He had had the privilege of enjoying its comfort for some little time, and he should certainly vacate it with some regret. The speaker then placed the following resolution before the meeting :—

> That the report of the Board of Management, together with the accounts and balance sheet, as printed and certified by the auditors, acopy of which has been sent to every member, be received, passed, and adopted.

Major L. C. Dams seconded the resolution. He referred to the fact that at first he had thought the sun for general expenses had appeared rather high, but after hearing the explanation of the secretary he had come to a different conclusion. As perhaps other people, who might not have the same opportunity of obtaining a correct view of the matter, might also think the sum was a high one, he would venture to suggest that in future reports might give in a little more detail the expenses. He understood these charges this year included legal expenditure and leases and such amounts. As one of the body of subscribers he wished to say that all ought to be entirely satisfied with the way in which the Institution was managed, and they all could feel that any small amount that they might give to an Institution managed as that one was, could not fail to be put to the best possible use and do good. He trusted many more people in the trade would come to his way of thinking, for he felt absolutely convinced that their money was well dealt with. He appealed to the trade to not only increase their past subscriptions, but also to increase the numbers subscribing.

Mr. Spiers said he was not going to raise any grievance whatever, but, on the contrary, to congratulate the members of the Institution on the excellent work the Board had done in the past year, and also to congratulate the Board upon the success their efforts had achieved. Taking both report and balance-sheet together, they were most satisfactory from beginning to end, and all one could wish. They could not always expect to progress by leaps and bounds, but they had been moving forward gradually, and had gone further than some of them had anticipated would be the case, especially after the experience of former years. The speaker then offered a few suggestions to the Board for their consideration. One suggestion was that there should be some better mode of distinguishing between those subscribers paying 5s. or 10s. 6d. a year, and those of £1 1s. and upwards. The report stated that there were 507 members, and 254 subscribers, but in fact they were all subscribers, and it seemed to the speaker that the denomination was wrong in some way. They were well aware as to what the difference was, but he would like to see some other mode of description adopted. The next item he referred to was that of temporary relief, and he expressed himself delighted at the amount expended in that direction, and entirely confident in the way the

Board had dispensed the amount. To have been able to send out so large an amount as that showed what an immense benefit their institution was to members. Mr. Spiers went on to refer to the large amount of work which fell upon the Secretary, and to the wise determination of the board to enter into the new arrangement with that gentleman under which his salary was increased. Local committees had been referred to, and the value of their work. He was sorry there were not more of these local committees, because he believed it would be quite possible to have good results in most large places. There were, to mention but a few, Liverpool, Manchester, Birmingham, Leeds, Newcastle and Glasgow. He mentioned those as leading places, and in all those important towns he thought, they ought to get local committees to work in their interests.

The resolution was then put before the meeting and passed nem. con.

Mr. Mayer submitted the following resolution :—

> That this annual general meeting directs the Board coming into office to invest the sum of £100 in trustee securities in the names of the three trustees, and add the Stock to the permanent Invested Capital of the Institution.

Half that amount they proposed to put into the fund had been given by Lord Harrowby, who had made a special point of increasing their permanent special fund of the Institution, so they were carrying out his wishes, and also benefiting the financial side of the Institution in this.

Mr. Robt. Audley, seconding, said he would have been pleased to have seen the amount increased, for £100, he considered, was but a very small amount to take out of the £950. It was quite necessary that the income of the Institution should be as large as possible. He might say with regard to the Potteries, the efforts last year had been directed more toward increasing the number of subscribers than the donations, for they felt that it would be to the betterment of the position if they obtained more regular subscriptions. He was sure, had they directed their attention to it they could have obtained more in the way of donations, but that would not have been so much to the subsequent advantage of the Institution, and the results of their labours would be felt during the next few years.

Mr. Mayer said they had only put £100 into the Fund as they did not want to tie the whole of their money up as the Institution was increasing. If they tied their money up they could not easily, without calling a special meeting, obtain that money for immediate use, and £600 had therefore been invested in a separate fund, which, like the other, was invested in the trustees, but which could be made use of at any time for any particular call.

The resolution was carried nem. dis.

The Chairman then proposed :—

> That the members in annual general meeting assembled desire to express to the Rt. Hon. the Earl of Harrowby their hearty appreciation of his valuable services to the Institution, and hereby re-elect him President for the ensuing year, trusting that he will be spared for many years to continue the honour he now confers by occupying that position.

The speaker was sure it needed no words of his to commend that resolution to every member. The happy thought of some member of the committee to approach Lord Harrowby to be their President was a very fortunate one indeed. They all knew him, not only in Staffordshire, but throughout the whole country, and they could assure any one that Lord Harrowby was a man devoted to good works of every description, one who did thoroughly everything he took in hand, as they had had evidence of in their previous meetings. His presence had been an inspiration to every member of the committee, and almost every member of the whole Institution. He therefore had the greatest pleasure in moving the resolution for his re-election as president.

Mr. Edis seconded with pleasure. As the previous speaker had said, they were exceedingly fortunate in having Lord Harrowby at their head, and he trusted his connection with the Institution would last for very many years to come.

This was carried with acclamation.

The election of the Board of Management for the ensuing year by ballot was then proceeded with, and the result was the election of the following : Messrs. J. J. Aynsley, J.P., C. H. Bowers, J. Brock, jun., R. Chomette, C. J. Cooper, Frank Findlay, G. D. Francis, Chas. E. Green, L. W. Hadley, J. E. Heath, Jules C. Houdret, Congreve Jackson, T. W. Jenkinson, A. Overton Jones, F. R. Knight, R. C. Lampard, F. Linnett, Felix W. Lloyd, F. J. Mayer, J. T. Mogridge, John Porter, Charles J. Pratt, A. R. Prichard, W. Rhodes, R. Shanton, S. Stanley, W. H. Stuart, J.P., Fred Tugwell, F. Williamson, W. W. Wood.

The scrutineers elected for the purpose of the ballot were Messrs. Robert Bax, W. J. Miller, and Gordon Spriggs.

Mr. W. Rhodes (vice-chairman) submitted the following resolution :—

> That this annual general meeting approves the nomination submitted by the Board of Management, and hereby expresses its appreciation of the services rendered by Mr. W. G. Savill during the chairmanship of that Board by electing him a Governor, and to such position this annual general meeting now declares him elected.

If it had been in his power to select the proposition he had to make, said the speaker, it would be the one now in his hands. It needed no words of his to say how assiduous Mr. Savill had been during the whole of the year he had been carrying out the duties connected with the post of chairmanship of the Board. Mr. Savill had always been at the helm, with one exception when he was unable to be present, and that was the only occasion upon which he had called upon his vice-chairman to act in his stead. It had been remarked that the position of deputy vice-chairman was almost defunct from non-use, but the position of vice-chairman equally was almost defunct. It had, however, been a great pleasure to be vice-chairman under Mr. Savill, although there had been little if anything to do. As chairman, Mr. Savill had put the whole of his energies into the work, and he had left no stone unturned in his efforts on behalf of the Institution. Many present were aware of his work, and it needed no suggestion on the speaker's part to support the resolution, and he thought they would be doing well indeed if they accepted the proposition he put to them.

Mr. E. P. Evans, in seconding, added his word of appreciation and gratitude to Mr. Savill for his endeavours. He went on to remark that he would like, if he might take that opportunity, to offer his congratulations to the Board on the forward movement in the past year, to provide for what he might venture to call the present generation, and at the same time, as one of the old members, he would say they were all indebted, as no doubt the Board of Management would agree, to their old friend Mr. Spiers, and the many others who started the institution.

The resolution was adopted with applause.

Mr. Savill, responding, said he was much obliged for the many too-kind remarks which had been made, and the very generous way in which those remarks had been received by the members present. He could assure them that his year of office had been one of great pleasure, and he had enjoyed it much, although it was true that some-

times it had been a little trying. He could only assure them that in the future if there were anything he was able to do for the good of the Institution it would be not only a duty but also a pleasure.

Mr. G. D. Francis proposed :—

That Mr. H. Spencer Daniell, having kindly consented to again undertake the duties of Treasurer, be and is hereby elected Treasurer for the ensuing year.

The name of Daniell, said the proposer, was well known, and they were particularly fortunate in getting one of that name to assist them ; and also very fortunate in getting the present treasurer as a successor to Mr. Cyrus Daniell.

Mr. J. T. Lewis seconded, and the resolution was carried with applause.

Mr. C. J. Cooper proposed, and Mr. Esland seconded, the re-election of Messrs. Vandercom & Co., as solicitors for the ensuing year.

This was agreed to nem. con.

Mr. H. Davies proposed, and Mr. F. H. Knight seconded the re-election of Messrs. Basil Hallet & Co., as auditors for the year, and this was agreed to.

Mr. J. Thompson Bourne proposed :—

That the best thanks of the members in annual general meeting assembled be and are hereby tendered to the chairman, the vice-chairman, the deputy vice-chairman, the governors, the chairman of committees, the members of committees, and all the other officers of the Board of Management for their assiduous attention to the duties connected with the direction and control of the Institution during the past year ; they congratulate them upon the success they have achieved, and assure them that what has been done meets with entire approval.

This resolution, said Mr. Bourne, would receive the hearty commendation of all present.

Mr. Spiers seconded the resolution, which as the mover suggested, was heartily commended by all.

Mr. W. W. Wood proposed a hearty vote of thanks to the Secretary for the able manner in which he had conducted his duties and for the share he had had in the forward movement of the Institution.

Major L. C. Dams seconded with a few words of appreciation.

Mr. W. G. Savill, as chairman for the past year, had pleasure in supporting the resolution that their appreciation be expressed to Mr. James, who had proved himself a very zealous worker for the Institution, and one who was always ready to carry out any suggestion made by the Board.

Mr. James, in responding, said he was deeply indebted to the members for the way in which they had received the kind remarks. It was very gratifying indeed to know that the work for which he had been paid was appreciated. He felt keenly interested in the work, and he was certain that the Institution had a bright future before it. The Institution was no chicken, but had a career of 31 years behind it, which certainly showed that it had got out of all infantile complaints. When one looked back through the archives of the Institution, the more one saw the labour of those who had worked for many years quietly and assiduously, but who had perhaps not had an opportunity of doing what has been done during the past two or three years, he could not help noticing that the spade work of that Institution had been carried out by men like Mr. Ronald Doulton, Mr. Spiers, and by some who had passed beyond the region of thanks. They had indeed done what could never be properly and adequately repaid, for it took some time to be able to find out the worth of many people who had not always shone brilliantly at the time, but had, nevertheless, been doing great and good work. He was grateful for what had been said of his efforts, but if it had not been for the Board, and if it were not for the men like their present chairman, and men like Mr. Edis and Mr. Mogridge, and Mr. Chas. Green, and others he had not time to mention specifically, the present position would not have been attained. They thanked him, but in reality they should thank those others, because he was simply doing his work, and if the Board had not been capable of handling the duties and dealing with them, their Institution would not be much good. There was one thing the members could do which the Board could not achieve. They were many ; the Board was few. They could go out into the warehouses and shops and large stores, and could tell of the benefits, the policy, and aims of the Institution, what good it had done, what it was capable of doing, and could instil into their fellows the knowledge of the necessity of self-preservation and the necessity of looking after each other. They might pay their five shillings, their half-guineas and guineas, and they might get nothing from it, but they had the consolation of knowing that they had lost nothing, for they wanted nothing, while they would know they had done good for their fellow workmen. And ladies, too, could help ; he felt strongly that they could do more than they had done for the good of the Institution. The offices at 3, Dyers Buildings, are open on Tuesdays and Fridays. Members will find accommodation there for interviews, writing, or seeing the trade papers. The Employment Bureau offered splendid opportunities to both employers and employed for getting into touch ; he was most anxious that members should, when out of work, avail themselves of the Bureau and the facilities it afforded ; he was glad to have the opportunity of saying the Institution was not there to provide jobs for those who had already got work, and wanted better jobs than they had, but existed for those who had the misfortune to lose a situation. He could not tell them the good that had been accomplished, of the distress relieved, and the benefits bestowed by their institution. Theirs was not a benefit society, for there was a difference between a benefit society and their Institution. The former offered something definite and limited, and the subscriber got something definite for his subscription. If benefits were offered for influenza, a person with measles would not be able to partake of those benefits. Their society, however, was not limited in that way ; for they said so long as there was distress needing relief, or weakness needing help, they would hold out the helping hand. If they would do their best for such an Institution they would be offering the best thanks possible to those who managed its affairs.

Mr. W. G. Savill then proposed a vote of thanks to the chairman for occupying that position that evening. They appreciated and esteemed his presence, first for himself personally, and, secondly, for the very much esteemed firm which he represented ; the firm which had been substantial and generous supporters of the Institution since its earliest days.

Mr. Chas. E. Green, seconding the vote, said it was very gratifying to have a representative of Messrs. Doulton there, and he hoped that since Mr. Bailey had "bitten of the fruit," he would see him a number of times at their meetings. Mr. Bailey was better known in the Potteries than in London, but that was London's loss, and he hoped from that night, so far as that Institution was concerned, Mr. Bailey would get to be as well known there as in the Potteries. Speaking as a Pottery man, there was no one more respected than Mr. Bailey for the work he did for the good of the Potteries generally, for the workm[illegible] the firms.

Mr. Bailey, responding to the vote, wh[illegible] tically received, said it was an honour to [illegible] chair that night, for the work of their I[illegible] its own reward. It needed no thanks.

The meeting then terminated.

PORCELAIN GLAZES.

PORCELAIN glazes are mixtures consisting of ball and china clay, feldspar, flint, and some strongly active fluxing material or materials, such as $CaCO_3$, $MgCO_3$, ZnO, $BaCO_3$, $Ca_3(PO_4)_2$, and $CaSO_4 . 10H_2O$.

For the very hardest fired (cones 12-14) porcelains, the flux consists of such eutectics as would be formed by fusing $CaCO_3$ with clay, feldspar and flint.

For the medium fired (cones 8-12) porcelains, ZnO is added to increase the fusibility of the glaze flux. The other materials above mentioned are used at times but not so frequently or to as good advantage as ZnO and $CaCO_3$.

Terra-cotta glazes are derivatives from the type porcelain glaze, but are rendered more fusible (cones 5-8) by approximating more closely the most fusible mixture of clay, feldspar, flint, calcium carbonate, and zinc oxide.

Terra-cotta glazes are clear or opaque. If used over a white engobe they are designed to be more translucent than when used directly on fireclay bodies.

The two conditions in manufacture of terra-cotta that make necessary the development of a mixture somewhat different from those of the porcelain glazes are :

(1) Lower heat treatment to mature the body.

(2) Necessity of making a white opaque covering to a coloured burning body composed of iron-bearing clays.

When white engobes are used, the glaze must have the required fusibility, but need not be as opaque as if it were to be applied directly on to the body clay.

Stoneware glazes of the Bristol type are similar to the terra-cotta glazes, but are so constituted as to be sufficiently opaque to hide the colour of the body without the aid of an engobe. This requirement calls for the use of what is popularly known as an opacifier. Zinc and tin oxides are the materials most used to develop opacity. Bone ash, fluorspar and zirconium[2] have been used with very limited success.

Typical Formulæ.

Hard Fire Porcelain (cone 12-14).—See Hainbach, "Pottery Decoration," p. 80.

$$\left.\begin{matrix}0{\cdot}8\ CaO\\0{\cdot}2\ K_2O\end{matrix}\right\}0{\cdot}8\ Al_2O_3\ 4.4\ SiO_2$$

$$\left.\begin{matrix}0{\cdot}7\ CaO\\0{\cdot}3\ K_2O\end{matrix}\right\}0{\cdot}8\ Al_2O_3\ 8.0\ SiO_2$$

Medium Fire Porcelain (cone 8-12).

$$\left.\begin{matrix}0{\cdot}35\ CaO\\0{\cdot}25\ K_2O\\0{\cdot}40\ ZnO\end{matrix}\right\}0{\cdot}475\ Al_2O_3\ 4.15\ SiO_2$$

used on one fire ware.

$$\left.\begin{matrix}0{\cdot}7\ CaO\\0{\cdot}3\ K_2O\end{matrix}\right\}0{\cdot}5\ Al_2O_3\ 4.0\ SiO_2$$

used on biscuited ware.

Terra-cotta Glaze.—See Parmelee, Trans. A.C.S., Vol. IX.

$$\left.\begin{matrix}0{\cdot}1\text{–}0{\cdot}7\ CaO\\0{\cdot}5\text{–}0{\cdot}2\ K_2O\\0{\cdot}4\text{–}0{\cdot}1\ ZnO\end{matrix}\right\}0{\cdot}55\ Al_2O_3\ 3.3\ SiO_2$$

Stoneware Bristol Glaze.—See Purdy, Trans. A.C.S., Vols. IV. and V.

$$\left.\begin{matrix}0{\cdot}3\text{–}0{\cdot}15\ CaO\\0{\cdot}30\text{–}0{\cdot}45\ K_2O\\0{\cdot}4\text{–}0{\cdot}4\ ZnO\end{matrix}\right\}0.55\ Al_2O_3\ 3{\cdot}00\ SiO_2$$

[1] By Ross C. Purdy, Columbus, O. The study here reported was made with the senior class at the Ohio State University. The study was made first by the class of 1910 and repeated with new mixes by the class of 1911. All weighings, &c., were made by two members of the class employed for that purpose. The report as here presented is a copy of the class report reprinted from Vol. XIII. of the Transactions of the American Ceramic Society.

[2] See "Sprechsaal," 40, 617 (1907).

References.

"Stoneware Glazes," Purdy, p. 61, Vol. IV., Trans. A.C.S. "Bristol Glazes," Purdy, p. 136, Vol. V., Trans. A.C.S. "Salt Glazes," Barringer, p. 105, Vol. V., Trans. A.C.S. "Enamelled Bricks," Barringer, p. 256, Vol. V., Trans. A.C.S. "Stoneware Glazes," Geijsbeek, p. 207, Vol. VI., Trans. A.C.S. "Matt Glazes at High Temp.," Binns, p. 115, Vol. VII., Trans. A.C.S. "Bodies and Glazes," Weelans, p. 483, Vol. IX., Trans. A.C.S. "Terra-cotta Glazes," Parmelee, p. 577, Vol. IX., Trans. A.C.S. "Engobes and Glazes," Searle, Brick, 1909 (January to May). "A Cheap Enamel for Stoneware," Stull, p. 618, Vol. XI., Trans. A.C.S.

Purpose of Experiment.

The purposes of the following experiment are :

(1) To determine the influence of variation in constitution of these varieties of glazes and to develop a relationship between the porcelain and Bristol glazes.

(2) To determine their fitness for the several purposes.

(*a*) On a porcelain body of the following constitution and biscuited at cone 4 :

5 English ball clay No. 12.
5 Tennessee ball clay No. 9.
10 English china clay.
10 Georgia china clay.
10 Florida china clay.
20 Golding flint.
20 Eureka French flint.
20 Brandywine feldspar.

(*b*) Robinson Clay Products Co. stoneware clay compared by stiff mud process in the Mueller auger machine and dried to "Bone dryness."

Outline of Experiment.

The experimental series were divided into five groups, the division being based on the molecular ratio of the RO to the R_2O as follows :—

Division into Groups.

	Groups.				
	I	II	III	IV	V
RO	8	6	4	3	2
R_2O	2	2	2	2	2

The groups were divided into five series each, the division being based on the molecular ratio of CaO to ZnO as follows :—

Division into Series.

	Series.				
	A	B	C	D	E
CaO	1	3	1	1	0
ZnO	0	1	1	3	1

Division into Members.

	Members.				
	2	1	3	4	5
Eqv. Al_2O_3	0·5	0·55	0·6	0·7	0·8

Silica content in equivalents is in ratio with the equivalents of Al_2O_3 as 6 : (1). This is low for porcelain glazes

but nearly correct for Bristol. Further work is under way to determine the influence of the increased SiO_2 content.

TABLE SHOWING MOLECULAR PROPORTIONS FOR EACH GROUP.

GROUP I.
(25 glazes.)

Division into series.				Division of series into members.		
Series No.	Equivalent of			Member No	Equivalent of	
	CaO	KNaO	ZnO		Al_2O_3	SiO_2
A	0·8	0·2	—	1	0·50	3·0
B	0·6	0·2	0·2	2	0·55	3·3
C	0·4	0·2	0·4	3	0·60	3·6
D	0·2	0·2	0·6	4	0·70	4·2
E	—	0·2	0·8	5	0·80	4·8

GROUP II.
(25 glazes.)

Division into series.				Division of series into members.		
Series No.	Equivalent No.			Member No.	Equivalent of	
	CaO	KNaO	ZnO		Al_2O_3	SiO_2
A	0·75	0·25	—	1	0·50	3·0
B	0·563	0·25	0·1871	2	0·55	3·3
C	0·375	0·25	0·375	3	0·60	3·6
D	0·187	0·27	0·563	4	0·70	4·2
E	—	0·25	0·75	5	0·80	4·8

GROUP III.
(25 glazes.)

Division into series.				Division of series into members.		
Series No.	Equivalent of			Member No.	Equivalent of	
	CaO	KNaO	ZnO		Al_2O_3	SiO_2
A	0·666	0·333	..	1	0·50	3·0
B	0·5	0·333	0·167	2	0·55	3·3
C	0·333	0·333	0·333	3	0·60	3·6
D	0·167	0·333	0·50	4	0·70	4·2
E	—	0·333	0·666	5	0·80	4·8

GROUP IV.
(25 glazes.)

Division of series.				Division of series into members.		
Series No.	Equivalent of			Member No.	Equivalent of	
	CaO	KNaO	ZnO		Al_2O_3	SiO_2
A	0·6	0·40	—	1	0·50	3·0
B	0·45	0·40	0·15	2	0·55	3·3
C	0·3	0·40	0·30	3	0·60	3·6
D	0·15	0·40	0·45	4	0·70	4·2
E	—	0·40	0·60	5	0·80	4·8

GROUP V.
(25 glazes.)

Division into series.				Division of series into members.		
Series No.	Equivalent No.			Member No.	Equivalent of	
	CaO	KNaO	ZnO		Al_2O_3	SiO_3
A	0·50	0·50	—	1	0·50	3·0
B	0·375	0·50	0·125	2	0·55	3·3
C	0·25	0·50	0·25	3	0·60	3·6
D	0·125	0·50	0·375	4	0·70	4·2
E	—	0·50	0·50	5	0·80	4·8

CALCULATIONS.

As example of manner of calculating these glazes, that for Member 3 of Series C, Group IV., is here given.

0·3 equiv. whiting = 0·3 × 100	30·0
0·4 equiv. feldspar = 0·4 × 556	222·4
0·3 equiv. zinc oxide = 0·3 × 81	24·3
0·3 equiv. clay = 0·2 × 258	51·6
0·8 equiv. flint = 0·8 × 60	48·0
	376·3

PROCEDURE.

MATERIALS USED.—The materials used in these glazes were :

Brandywine feldspar.
Mayfield ball clay.
Ohio silica flint.
Whiting.
Zinc oxide.

No soluble salt was added to check crawling.

MAKING OF GLAZES.—Each glaze was weighed separately (i.e., not made by blending), the weights in each case being checked by at least two operators.

The glazes were ground for 30 minutes in a 4-gallon ball mill screened and applied by dipping.

BURNING.—Since most of these glazes are more nearly of the porcelain than of the Bristol type, it was thought best to try them at heat ranges from cone 6 to cone 12 inclusive. Therefore, the effect of intensity of heat treatment was studied by burning to cones 6, 8, 10 and 12 respectively.

The length of burns varied from 26 to 52 hours, good distribution of heat being obtained in all but the cone 10 burn.

RESULTS OBTAINED.

CONE 7[1] (25 HOURS) STONEWARE BODY.

GROUP I.

MATURITY.—(1) Maximum maturity obtained in this group was in Series C. All members of this series have fair gloss, the gloss being unaffected by increase of clay. Members 1 and 2 of Series D likewise have fair gloss.

(2) The gloss of the remaining members of this group is very slight, and such as there is decreases with increase clay content.

(3) The gloss remaining equally fair throughout Series C points to the possible conclusion that with CaO and ZnO in the ratio of 1 : 1 increase in clay (from 0·3-0·6 equivalent) will not materially decrease the gloss.

OPACITY.—(1) Opacity increases with increase of clay content in all of the series of Group I.

(2) Opacity is increased as the zinc is increased at the expense of the CaO.

(3) Increase of ZnO is much more effective in increasing opacity than clay.

(4) All members of Series C have fair opacity, Members 4 and 5 being as white as tin enamels.

SURFACE DEFECTS.—(1) Ignoring defects which were obviously due to accidental causes, we find in Series D and E that high clay has caused a separation of the glaze quite similar to cracqueling.

(2) No crawling is evident.

GROUP II., CONE 7.

MATURITY.—(1) The members of the series of this group are slightly more glossy than the corresponding members of Group I.

(2) Members of Series C again have the best gloss.

[1] Three burns were made to obtain one at cone 6 that would be cone 6 throughout the kiln. In the third burn the heat treatment was uniform throughout, but instead of cone 6 we obtained cone 7. In this burn we had the same cone down on the inside of the saggars as on the outside.

(3) Increase of clay causes reduction in gloss in all series of this group.

Opacity.—(1) Same as that of Group I.

Group III., Cone 7.

Maturity.—(1) The glazes of this group as a whole are more glossy than those of Group II.

(2) Effect of clay in decreasing gloss is seen in this group also, but not so pronounced in Series D and E (i.e., with high ZnO).

Opacity.—(1) The opacity of Series C of this group is only slightly, if any, less than that of Series C, Group I., notwithstanding the lower content of ZnO (0·333 as compared with 0·4) and greater degree of maturity.

(2) Series D and E are white enamels throughout.

(3) The members of Series C show gradations in opacity from Member 1 which is a good glossy stoneware white, to Member 5 which has the whiteness of tin enamel although lacking somewhat in gloss.

Surface Defects.—(1) Members of Series D and E are badly cracqueled, those of Series E being the worse. This cracqueling thus seems to be made worse by the increase of ZnO at the expense of CaO.

Groups IV. and V., Cone 7.

Maturity.—(1) Except for Series A and B (high CaO) the glazes of these groups have no better gloss than those of Group III., the gloss of Series E being at its best in Group III.

(2) In Series A and B the gloss increases continuously from Group I. to Group V., but in all other series maximum gloss is attained in Group III. (0·333 equivalent feldspar).

Opacity.—(1) Opacity increases with both increase in clay and ZnO as in the preceding groups, the opacity of the members of Series D and E being equal to that of tin enamels.

(2) The opacity of Series C decreases slightly from Group III. to IV.

Surface Defects.—(1) With high calcium, the glazes of Group V. (Series A) seem to have shrunk, leaving an unglazed margin around the edge of the tile. Those members lowest in clay seem to have shrunk the worst.

(2) Crazing is bad in all members of Series A, B and C and in D1 of both Group IV. and Group V. and in D2 of Group V.

(3) Crazing decreases with increase of Al_2O_3 and ZnO.

General Conclusions on Cone 7 Burn.

1. Good Glazes.—The only glazes which may be classified as good from a commercial standpoint are the white enamels of Series C (1, 2, 3) and D (1 to 5 inclusive) of Group III. Member 1 of Series C, Group III. is as opaque as the best of Bristol glazes while the other members of this group are much more opaque, and those of Series D, Group III. are excellent white enamels.

2. Influence of Clay.—(*a*) In the high calcium series, addition of clay increases the refractoriness.

(*b*) When ZnO is 0·4 equivalent or more, increase of clay appears to have but slight effect on the gloss of the glaze. This is more pronounced as the feldspar increases, due perhaps to the total clay content, being less and less as the feldspar increases.

(*c*) Increase of clay in any of the series causes increase in opacity.

(*d*) In these studies, increase of clay has not caused increased cracqueling nor increased shrinkage of the glaze.

ZnO versus CaO.

Members 1 containing no ZnO and 0·50 equivalent are transparent.

As the ZnO increases the glazes become more opaque, opacity not being obtained with less than 0·333 as the Al_2O_3 content exceeds 0·55 equivalent.

(*c*) Crazing decreases with increase of ZnO.

(*d*) With low feldspar (less than 0·4 equivalent) maximum gloss is obtained when the ratio of CaO to ZnO is less than 1 : 1 while with higher feldspar the ratio of calcium to zinc must be higher, i.e., at least 3 : 1.

4. Effect of Feldspar.

(*a*) With the lowest Al_2O_3 content here experimented with (0·5 equivalent), maximum gloss is attained with 0·333 equivalent of feldspar.

(*b*) Feldspar increases tendency to craze.

(*c*) The crazed glazes are :—

Group III., Series A, Members 1, 2, and 3.
Group III., Series B, Members 1 and 2.
Group IV., Series A, Members 1 to 5 inclusive.
Group IV., Series B, Members 1, 2 and 3.
Group IV., Series C, Members 1, 2 and 3.
Group IV., Series D, Members 1 and 2.
Group V., Series A, Members 1 to 5 inclusive.
Group V., Series B, Members 1 to 5 inclusive.
Group V., Series C, Members 1 to 4 inclusive.
Group V., Series D, Members 1 and 2.

(*d*) To counteract crazing, decrease the feldspar and increase the zinc and clay.

(*e*) Except in Series A and B, mere increase of K_2O (at the expense of CaO and ZnO) does not affect opacity, and with this it follows that since the total amount of clay used as a source of Al_2O_3 decreases as the feldspar increases, any statement which has been made to the effect that increase of clay increased opacity must be considered as applying only to the results obtained in a given series where the equivalent of feldspar, zinc oxide and whiting remains constant.

Cone 8 + (28 hrs.) Stoneware.

Comparison with Cone 7 Burn.—1. Except for increased gloss the glazes with this heat treatment show the same evidence noted in the cone 7 burn.

2. Maximum gloss is obtained in Group IV. (feldspar 0·4 equivalent).

3. The gloss of Group II. with this heat treatment is the same as that attained in Group VII. at cone 7.

Good Glazes.—The glazes which, except for crawling, would be fair or good stoneware glazes, with this heat treatment (cone 8) are, for Group I. to III. inclusive, as follows :—

Series.	Members.				
A	1	2	3	–	–
B	1	2	3	4	–
C	1	2	3	4	5
D	1	2	3	4	–
E	–	–	–	–	–

In Group IV. all of Series C and Members 1, 2, 3 and 4 of Series D would be good stoneware glazes. When clay exceeds 0·1 equivalent, however, care would have to be exercised to prevent the glaze from parting in drying for when the glaze surface is thus broken, crawling of the glazes containing ZnO invariably follows.

Nearly all the glazes of Group V. and those of Series A and B of Group IV. are crazed.

Opacity.—None of the glazes are perfectly transparent, Members 1 and 2 of Series A being the most so.

The glazes are not any less opaque with this heat treatment than they were at cone 7. For a cheap enamel with this heat treatment (and they were good at cone 7) attention is called to Members 1, 2 and 3 of Series C, Group III. in which the zinc oxide content varies from 8·2 to 7·13 per cent. as compared to the 10 per cent. and more content in a great many Bristol glazes used in factories to-day. See Stull, p. 610, Vol XI., "Trans. A.C.S."

Increase of feldspar has not decreased the opacity, i.e., with a given Al_2O_3 content and a given ratio of CaO to ZnO, we have equivalent opacity without regard to the source of the Al_2O_3, i.e., whether from feldspar or clay.

Crawling.—Owing to some cause (not fully known) some of the glazes crawled badly. The only known factor that would have influence in promoting crawling in this investigation was the fact that heavy wads were used between the saggars and the heat was brought up rapidly, thus possibly causing the generation of steam within the saggars. Crawling has occurred at hit and miss places through the groups and series thus giving no evidence as to influence of change in constitution of the glaze.

In this cone 8 burn, there was no parting of the glaze similar to cracqueling.

Crazing.—Crazing is seen in :—

Group IV., Series A, Members 1 and 2.
Group IV., Series B, Member 1.
Group V., nearly entire group.

Cone 8 Porcelains.

Good Glazes.—

Group I., Series A, Member 1, 2.
Group I., Series B, Member 1, 2, 3.
Group I., Series C, Member 1, 2, 3, 4.
Group I., Series D, Member 1, 2, 3, 4.
Group II., Series A, Member 1, 2, 3.
Group II., Series B, Member 1, 2. 3, 4.
Group II., Series C, Member 1, 2, 3, 4, 5.
Group III., Series D, Member 1, 2, 3, 4.
Group III., Series A, Member 1, 2, 3, 4.
Group III., Series B, Member 1, 2, 3, 4, 5.
Group III., Series C, Member 1[1], 2[1], 3[1], 4[1], 5[1]
Group III., Series D, Member 1[1], 2[1], 3[1], 4[1]
Group IV., Series A, Member 1, 2, 3, 4, 5.
Group IV., Series B, Member 1, 2, 3, 4, 5.
Group IV., Series C, Member 1[1], 2[1], 3[1], 4[1], 5[1]
Group IV., Series D, Member 1[1], 2[1], 3[1], 4[1]

The glazes of Group V. either crazed or have too much of an egg-shell texture.

Cone 10 + (49 hours) Stoneware and Porcelain.

In this burn the distribution of heat was not as good as desired, and the conditions attending the firing prolonged the burn to an undesired length of time, resulting in a much inferior burn to the two just studied.

Inasmuch, however, as these same series of glazes were studied last year, we have a good check on the cone 10 heat treatment. The following notes, therefore, are composits of the results obtained on these two occasions.

In general the results obtained check those of the preceding burn (cone 8).

The degree of opacity on the stoneware body has not been impaired to any noteworthy degree by the increase in heat treatment, nor has the prolonged heating seemed to have had material effect, except in glazes which have the maximum zinc content, i.e., in Series D, Groups I., II. and III. In these the glazes are less glossy.

The best glazes are found in Groups III. and IV., Series C and D.

The gloss on the porcelain body while quite pronounced is not as good on the average of all trials as in the cone 8 burn. Those of the cone 8 were smooth glasses, while those of this burn are more on the egg-shell order.

Cone 12 (52 hours) Stoneware.

The effect on opacity of increased heat treatment from cone 10 to 12 cannot be discussed wholly from the trials at hand because in the cone 12 we had some flashing that brought the iron spots from the body through the glaze. In the experiments made on this same series of glazes last year, the gloss in the low zinc glazes was not impaired by the increased heat treatment, but the opacity of the high zinc was reduced. The results this year apparently check those of last year in that the gloss of glazes in Series A of each group is brighter, if anything, than that of the gloss of same glazes in the cone 10 burn.

The gloss of Series E of Groups I. to III., inclusive, is completely lost, while that of Series E, Group V., is not decreased to any extent with this heat treatment.

Good gloss is obtained in Series A, B, C of Groups I., II. and III., and in Series A, B, C, D of Group IV., and in all the Series of Group V.

With this heat treatment, the effect of clay is about the same as in the preceding burns, except that when feldspar is less than 0·5 equivalent (Group V.), the members of Series D and E (high zinc) have suffered a decided loss in gloss, this loss being the greatest in Group I., and progressively less as the feldspar increases.

Crazing with this heat treatment is just the same as with the less severe heat treatment.

Cone 12 (Porcelain.)

1. The good glazes with this heat treatment are as follows :—

Group I., Series A, Members 1, 2, 3
Group I., Series B, Members 1, 2, 3, 4, 5
Group I., Series C, Members 1, 2, 3
Group I., Series D, Members 1, 2, 3
Group II., Series A, Members 1, 2, 3
Group II., Series B, Members 1, 2, 3, 4, 5
Group II., Series C, Members 1[1], 2[1], 3[1], 4[1], 5[1]
Group II., Series D, Members 1[1], 2[1], 3[1], 4[1]
Group III., Series A, Members 1, 2, 3, 4
Group III., Series B, Members 1, 2, 3, 4
Group III., Series C, Members 1[1], 2[1], 3[1], 4[1], 5[1]
Group III., Series D, Members 1, 2, 3, 4, 5
Group IV., Series A, Members 1, 2, 3, 4, 5
Group IV., Series B, Members 1, 2, 3, 4, 5
Group IV., Series C, Members 1, 2, 3, 4, 5
Group IV., Series D, Members 1, 2, 3, 4, 5
Group IV., Series E, Members 1, 2, 3
Group V., Series A, Members 4, 5 crazed
Group V., Series B Members 3, 4, 5
Group V., Series C, Members 2, 3, 4, 5
Group V., Series D, Members 2, 3, 4, 5
Group V., Series E, Members 1, 2, 3, 4

2. The best glazes of the entire burn on porcelain are in Group III., Series C.

3. As the feldspar increases, the Al_2O_3 content may be present in larger amount without impairing the gloss or texture.

With the maximum feldspar, high Al_2O_3 is required to overcome the finely rippled surfaces peculiar to egg shells. These egg-shell surfaces are greatly like the surface produced by overfiring softer glazes, and since we find this egg-shell finish increasing with increasing heat treatment it may be also said to be due in this instance to overfiring, but we find this peculiar texture more characteristic of the high feldspar glazes which we know are not as fusible as the glazes of Groups III. and IV.

Except in Groups IV. and V., the glazes highest in zinc (Series E) are dull and dry.

[1] Glazes marked with [1] are the best.

[1] Glazes marked [1] are the best.

(*To be continued.*)

THE VISCOSITY OF BORATE GLASSES.*

INTRODUCTION.—The object of this research was to establish, in a qualitative manner at least, the laws of viscosity for molten glasses. An understanding of these laws is of fundamental importance to the silicate industries. The viscosity of molten borate glasses is treated in the present paper; investigations on silicate glasses are now in progress.

METHOD.—The method used for measuring the relative viscosities of the glasses was a modification of that of Tamman, which has been used by Greiner,[1] Arndt,[2] Doelter and Sirk,[3] and others. The principle involved is that of measuring the time of fall through a certain distance of an immersed body of given volume and known effective weight. If the weight is varied in the same liquid, the product of "weight × time" gives a constant known as the "fall-product." The "fall-product" has been shown by Landenburg[4] to be proportional to viscosity.

In this investigation, an analytical balance, sensitive to 0·10 mg., was fitted with a beam 24 in. long. To one end of the beam was attached a small scale pan, to the other a platinum wire about 5 ft. long. Inserted near the upper end of this platinum wire was a small rod having two deeply ground grooves exactly 1 in. apart. These grooves served as markers for getting the time of fall. The wire contained also a small turn-buckle, for use in adjusting the height of the plunger. To the lower end of the platinum wire was attached a platinum plunger consisting of a hollow cylinder 16·5 × 19 mm. outside dimensions, with walls 0·7 mm. thick, and weighing 16·5 grams. The hollow cylinder shape was adopted on account of its giving a large area for internal friction in a small volume, and at the same time being easy to clean. The charge was contained in a platinum crucible 4 cm. in diameter by 6·5 high. The heating was done in part in a platinum resistance furnace and in part in a small gas-fired pot furnace. We were able to get check readings on the same glass heated by the two methods.

The temperatures were determined by a pt—pt rod couple, immersed naked in the melt, and a Hartmann and Braun galvanometer. The couple and galvanometer were standardised against a similar outfit, calibrated by the U.S. Bureau of Standards and kept at the University for standardisation purposes.

The time of fall was obtained by means of a telescope, sighted on the small marked rod, and a stop-watch, reading 0·10 seconds. Care was taken to have the rod well in motion before the first mark crossed the hair line of the telescope. Parallax was avoided by having a scale fixed rigidly to a table behind the small rod. This method of obtaining the time of fall was considered superior to an automatic recording device in conditions such as these in which the time interval varied largely and in which there was considerable variation in temperature that would be liable to throw out of order any delicate mechanism. To an experienced observer, any variation in rate of fall, due to sticking, &c., during one reading is easily discernible.

The charges were melted in the platinum crucible and carried, with frequent stirring, to a temperature above that at which any determinations were made and sufficiently high to render them fluid enough to insure homogeneity. In all cases beautifully transparent liquids were secured. In a number of cases, after a series of determinations a charge was allowed to cool, was reground, and another series run the next day. In these cases check results were obtained. We were also able to get good check results on separate charges of the same composition, the determinations being run at intervals of several months. All readings were taken as the temperature was lowered step by step. On changing the temperature, an interval of half an hour, during which the charge was frequently stirred, was allowed to elapse in order to bring the whole charge to a uniform temperature.

MATERIALS.—The materials used were B_2O_3 $3H_2O$, Ba CO_3, Ca CO_3, Sr CO_3, Mg CO_3. The purest materials obtainable were used. Analyses showed that none of them contained more than a few thousandths of 1 per cent. impurities.

VOLATILISATION OF B_2O_3.—In order to allow for differential volatilisation of B_2O_3, the various glasses were analysed after the determinations were finished. It was found that differential volatilisation has taken place only in the mixtures containing less than 0·5 formula weights of base to 1 B_2O_3. The composition listed as 0·0272 Ba O 1 B_2O_3 was weighed out to contain 0·25 BaO, and the one listed as 0·1787 BaO 1 B_2O_3 was weighed out to contain 0·16⅔ BaO. Any loss that took place in compositions containing 0·5 formula weights or more of base must have consisted of volatilisation of borates and not of B_2O_3 alone.

THE RESULTS.—A summary of the results obtained is given in the accompanying tables and curves. The individual determinations checked as closely as could be hoped for, considering the nature of the liquids and the temperatures employed. In no case did an individual reading vary from the mean more than 5 per cent. and in the large majority of cases, the maximum variation from the mean was less than 2 per cent.

TABLE I.

B_2O_3 — 0·0274 BaO, 1 B_2O_3

Temperature Degrees Centigrade	Overweight in Grams	Number of Readings	Fall Product in Grams × 0·10 Seconds	Fall Product Average
708	7·	4	1799	1799
722	10·	4	1445	1445
750	5·	4	1110	1110
764	7·	4	973	
	10·	4	968	970
805	3·75	5	754	
		3	755	754·5
820	2·5	3	715	715
860	2·5	4	610	
	3·75	4	613	
	5·	4	612	612
935	7·	4	435	
	10·	4	441	438
940	2·5	4	430.5	
	3·75	4	431	
	5·	4	432	431
955	7·	4	401	401
972	5·	4	375	375
1000	2·5	5	340	
	3·75	4	326	
	5·	5	328	331
1077	4·	4	247	
	5·	8	245	246
1111	3·	5	214	
	4·	4	216	215
1194	2·	4	146	
	3·	4	144	145
1250	1·5	7	127·5	
	2·	4	127	127
1347	1·5	4	104·5	
	2·	4	102·5	103·5

Temperature Degrees Centigrade.	Overweight in Grams	Number of Readings	Fall Product in Grams × 0·10 Seconds	Fall Product Average
1000	4·	5	248	
	6·	4	254	251·0
1138	2·	5	110	
	3·	4	111	110·5
1180	2·	4	85	
	3·	4	85·5	85·0
1236	2·	4	70	
	3·	4	69	69·5
1333	1·	4	49	
	1·5	4	48	48·5

0.1787 BaO, 1 B_2O_3

903	3·	5	227	
	4·	4	228	227·5
917	3·	4	209	
	4·	4	210	209·5
1000	1·5	10	76	
	2·	4	77	76·5
1042	1·	4	40	
	1·5	5	39·2	39·6
1152	0·5	4	17·12	
	0·7	4	17·15	17·13
1265	0·4	5	10·0	
	0·5	4	10·0	10·0
1360	0·3	4	7·35	
	0·4	4	7·20	7·27

* A paper read by Homer F. Staley, of the Ceramic Engineering Laboratories, Ohio State University, at the International Congress of Applied Chemistry in New York, September, 1912.

[1] N. Jahrb. f. Mineral. 1908. II., p. 152.

[2] z. Electrochemie, XIII., p. 578.

[3] Monatshefte, XXXII., p. 643.

[4] Ann. d. Physik., XXI, 287.

TABLE II.

0.5 BaO, 1 B_2O_3

Temperature Degrees Centigrade.	Overweights in Grams.	Number of Readings.	Fall Product in Gram × 0·10 Seconds.	Fall Product Average.
915	1·5	4	163·00	
	2·0	4	164·50	164·00
1025	0·3	5	18·00	
	0·4	6	18·06	18·03
1140	0·2	5	5·22	
	0·3	3	5·15	5·18
1165	0·2	5	4·20	4·20
1220	0·2	5	3·80	
	0·3	4	3·90	3·85
1275	0·2	4	3·60	
	0·3	4	3·68	3·64
1330	0·2	4	3·50	
	0·3	4	3·60	3·55

0·66⅔ BaO, 1 B_2O_3

1100	0·2	4	7·25	7·25
1125	0·2	6	5·00	
	0·3	4	5·18	5·09
1165	0·2	4	3·75	
	0·3	4	3·72	3·73
1220	0·2	5	3·40	
	0·3	4	3·45	3·42
1292	0·2	5	3·12	
	0·3	4	3·30	3·21

1 BaO, 1 B_2O_3

1165	0·3	5	3·51	3·51
1220	0·2	4	3·20	
	0·3	3	3·10	3·15
1275	0·2	5	2·88	
	0·3	4	2·88	2·88

1·56 BaO, 1 B_2O_3

985	0·2	4	5·25	5·25
1010	0·2	4	4·05	
	0·3	4	4·20	4·12
1065	0·2	4	3·60	
	0·3	4	3·72	3·66
1165	0·2	4	3·10	
	0·3	4	3·12	3·11
1275	0·2	5	2·80	2·80

2 BaO, 1 B_2O_3

1165	0·2	4	3·02	
	0·3	4	3·00	3·01
1220	0·2	4	2·85	
	0·3	4	2·85	2·85
1275	0·2	4	2 65	
	0·3	4	2·66	2·655

TABLE III.

0·5 CaO, 1 B_2O_3

Temperature Degrees Centigrade.	Overweight in Grams.	Number of Readings.	Fall Product in Grams × 0·10 Seconds.	Fall Product Average.
1138	0·5	4	17·0	17·0
1170	0·3	4	12·075	
	0·5	4	12·00	12·04
1220	0·3	4	6·3	6·3
1236	0·2	4	5·0	5·0
1275	0·15	5	3·03	
	0·2	5	3·00	3·015
1347	0·15	4	2·55	
	0·2	4	2·60	2·575

0·5 SrO, 1 B_2O_3

1044	3·0	5	77·5	77·5
1055	2·0	4	71·0	71·0
1165	0·4	4	16·0	
	0·5	4	16·0	16·0
1220	0·3	4	8·4	
	0·4	4	8·4	8·4
1265	0·2	4	5·95	
	0·3	4	6·15	6·05
1347	0·15	6	4·50	
	0·2	6	4·48	4·49

0·25 CaO, BaO, 1 B_2O_3

Temperature Degrees Centigrade.	Overweight in Grams.	Number of Readings.	Fall Product in Grams × 0·10 Seconds.	Fall Product Average.
1042	1·0	4	59·0	59·0
1055	1·0	4	45·0	
	1·5	4	45·4	45·2
1070	1·0	4	32·0	
	1·5	4	31·5	31·75
1152	0·3	4	8·1	
	0·4	4	8·2	8·15
1180	0·2	4	6·15	
	0·3	4	6·19	6·17
1222	0·15	4	4·65	
	0·20	4	4·60	
	*0·15	4	4·58	
	0·20	4	4·50	4·58
1265	0·10	5	3·42	
	0·15	4	3·45	3·435
1305	0·10	4	3·00	
	0·15	4	3·08	3·04
1361	0·10	4	2·92	
	0·15	6	2·85	2·89

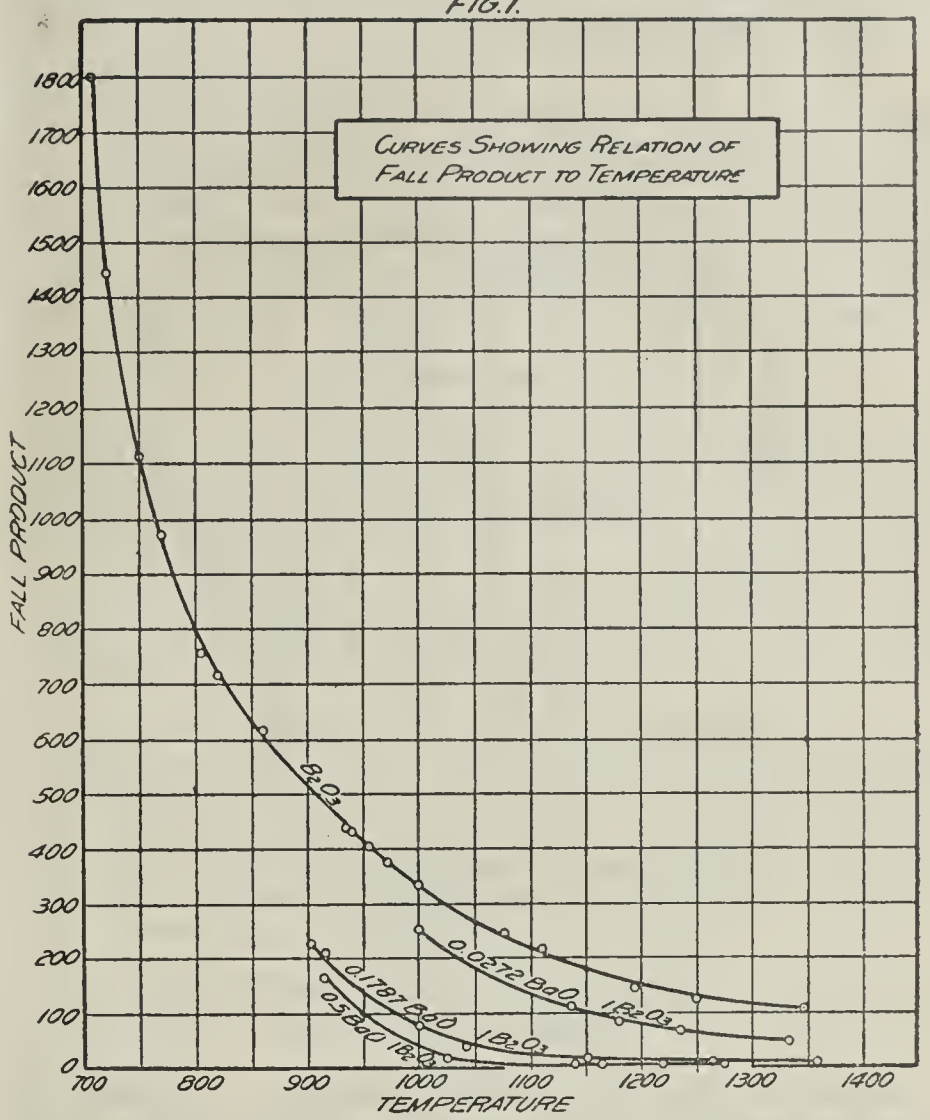
* Different melt from that giving the two readings above.

An attempt was made to obtain determinations on a glass of the composition 0·5 Mg O 1 B_2O_3. It was found that the plunger dropped slowly through the upper layer of glass and very rapidly through the lower layer, indicating that the glass consisted of two non-miscible liquids. Reference to the literature confirmed this supposition for it has been shown by Guertler[1] that this composition forms a pair of non-miscible liquids.

[1] Zt. Anor. Chemie, XL., 225.

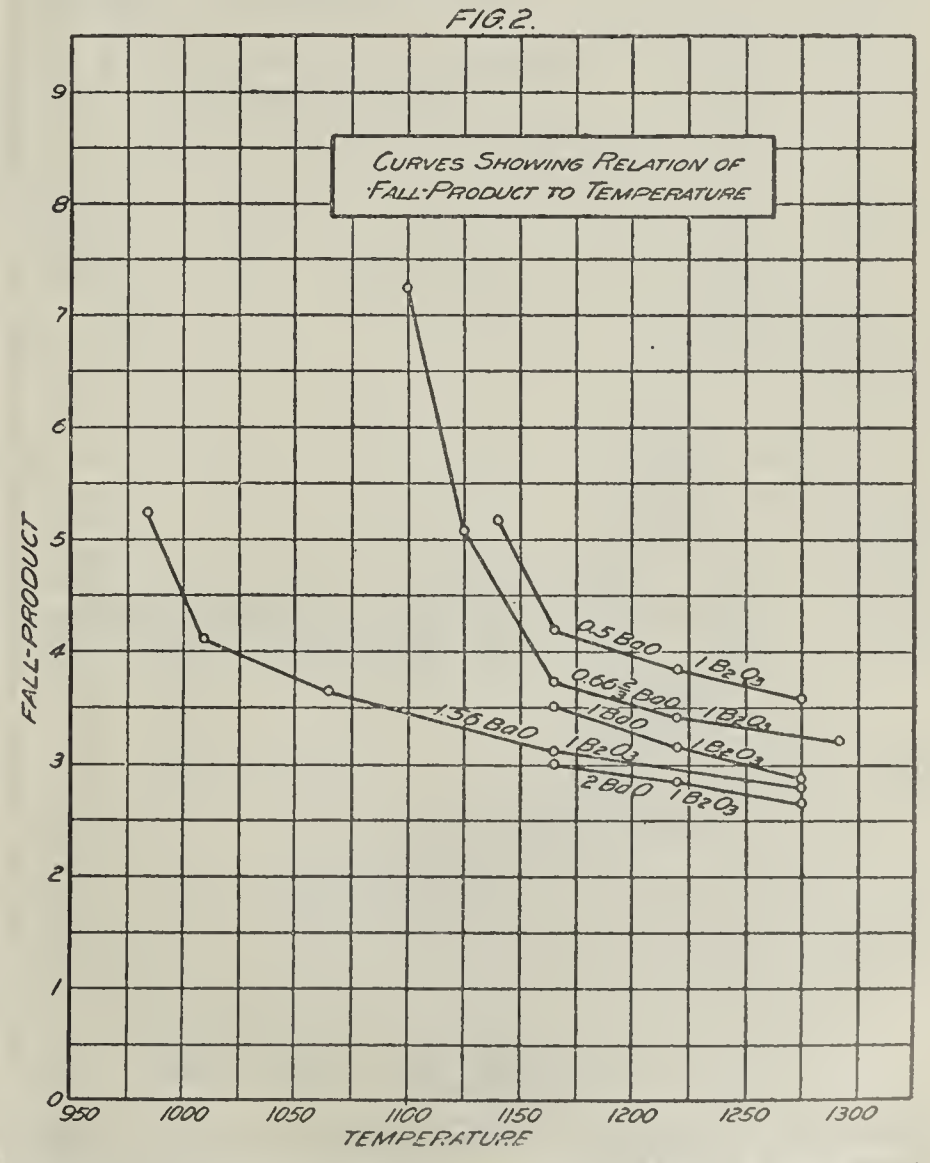
CONCLUSIONS.—I. The viscosity of molten borate glasses decreases at a slowly decreasing rate with increase of

FIG.1.



temperature. In other words, the viscosity is a hyperbolic function of temperature.

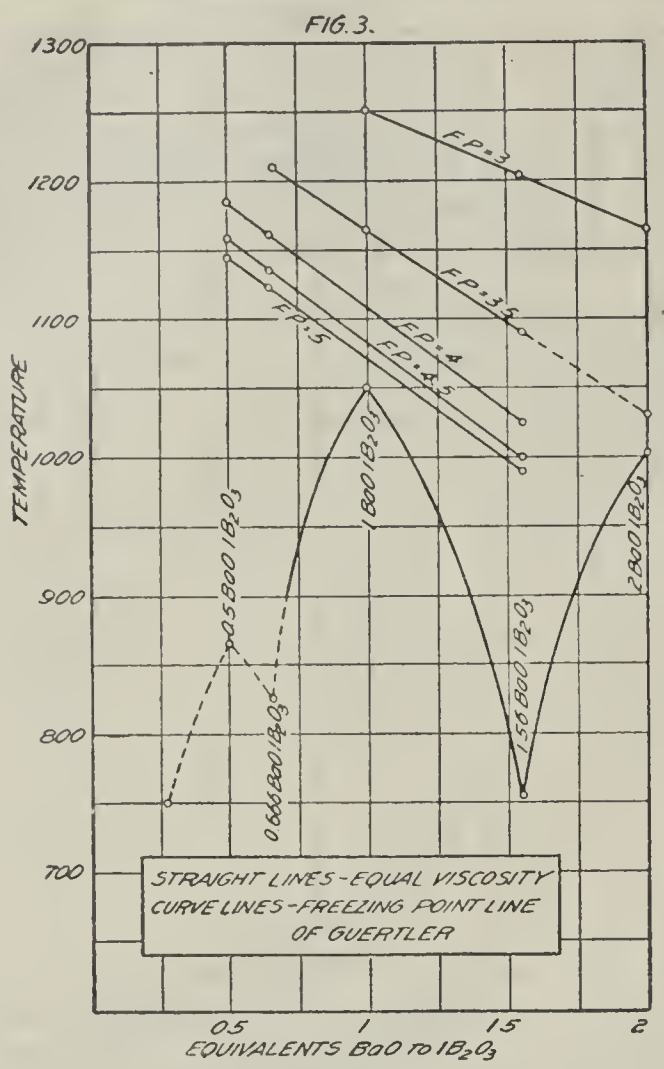
FIG.2.



II. Each glass has a characteristic rate of decrease of viscosity with temperature. The more viscous the borate

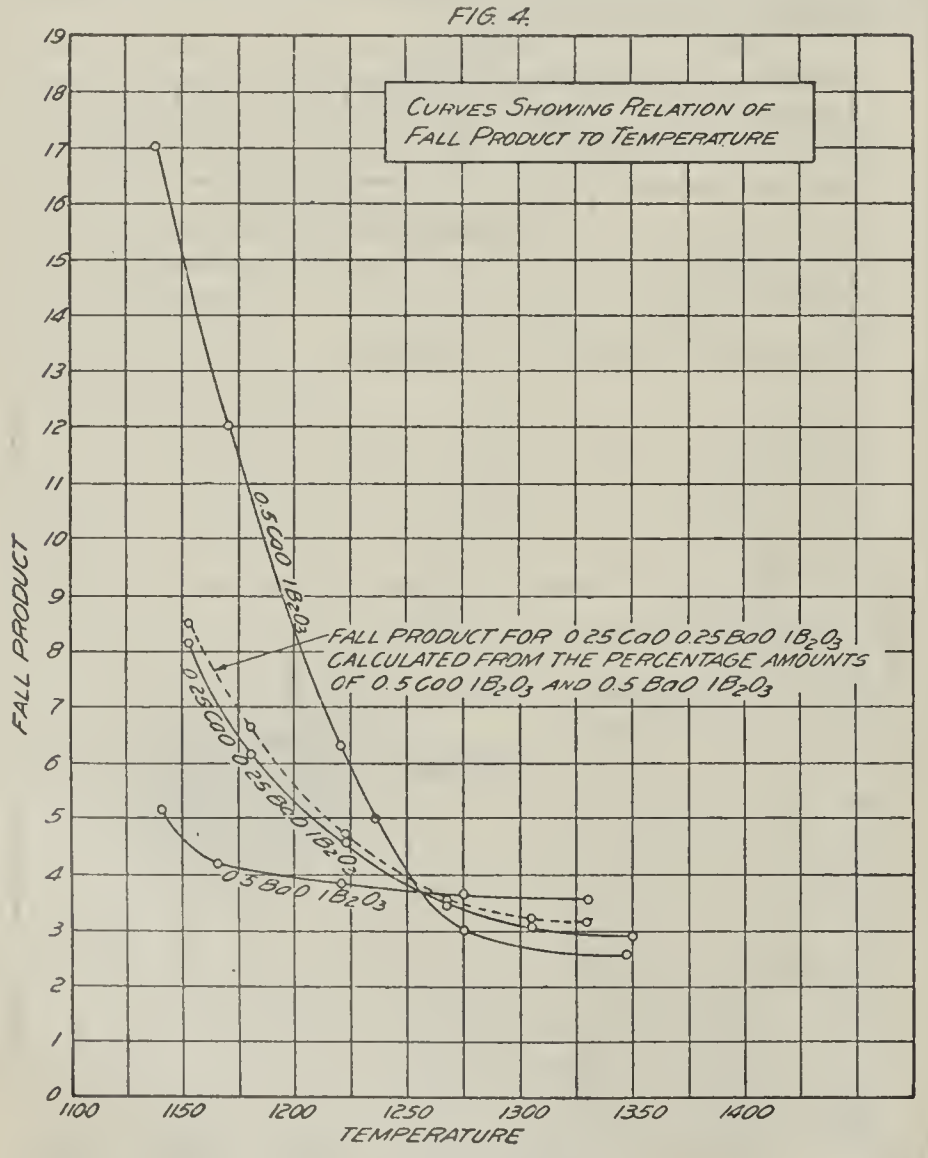
at low temperatures, the more rapid is the rate of decrease with the rise of temperature. The result is that the

FIG. 3.



viscosities of a series of borate glasses may vary widely at ow temperatures but converge rapidly towards what is

FIG. 4.



practically a minimum as the temperature is raised. (See Figs. I., II., and IV.)

III. The viscosity of B_2O_3 is greater at any given temperature than any mixture of B_2O_3 with a basic oxide studied.

IV. In a series of mixtures of B_2O_3 with BaO, the viscosity decreased continuously with increase of BaO. No minimum points in viscosity-composition curves were found. (See Figs. I. and II.).

V. In mixtures between B_2O_3 and 0·5 BaO 1 B_2O_3, the decrease of viscosity is out of proportion to the percentage or molecular amount of BaO present, the first additions of BaO having the greatest effect. The viscosity of the mixtures is also less than would be calculated by the rule of mixtures from the percentage amounts of B_2O_3 and 0·5 BaO B_2O_3 present and their respective viscosities. (See Figs. I. and VI.) For practical purposes in ceramic operations, the calculated values could not be used.

VI. In mixtures of B_2O_3 and BaO in which the compositions vary from 0·5 BaO 1 B_2O_3 to 2 BaO 1 B_2O_3, the viscosity decreases slowly with increase of BaO, and in almost direct proportion to the amount of BaO present. The viscosity of mixtures falls slightly below the calculated

FIG 5

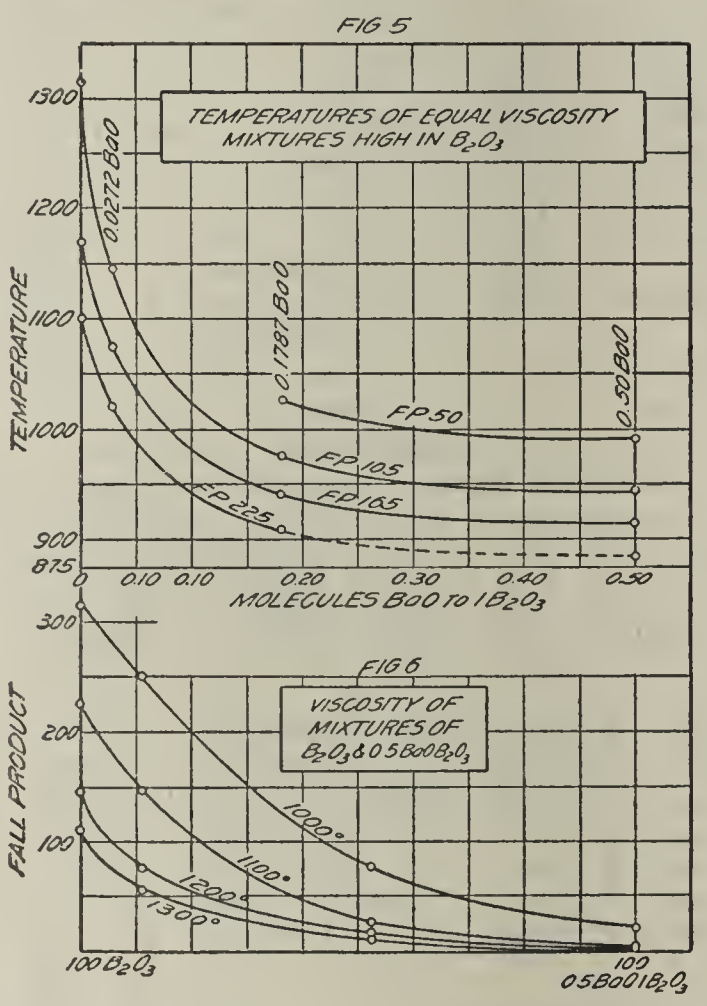


FIG 6

additive values for the definite compounds. For practical purposes, the calculated values could be used.

VII. The Viscosity at various temperatures of a mixture in equal molecular proportions of 0·5 CaO B_2O_3 and 0·5 BaO B_2O_3 falls very slightly below the calculated additive values for the percentage amounts of the two end members. (See Fig. IV.) For practical purposes, the calculated values could be used.

VIII. There is no relation between the melting point line of a series of borates and the lines indicating temperatures of equal viscosity. Eutectic compositions occur at median points on the viscosity line and are of no special significance.[1] (See Fig. III.[2]). In mixtures of BaO and B_2O_3 containing more than 0·5 BaO to 1 B_2O_3, the lines indicating temperatures of equal viscosity are straight and roughly parallel. (See Fig. III.) In mixtures containing less than 0·5 BaO to 1 B_2O_3, the lines are parabolic and roughly parallel. (See Fig. V.)

[1] Cf. Trans. Amer. Cer. Soc., XIII., p. 675.

[2] The "Freezing Point Line" is taken from Guertler, Zt. Anorg. Chemie, XL., 352.

IX. The fact that mixtures of B_2O_3 with 0·5 BaO B_2O_3 fall in that class of liquid mixtures in which the viscosity is considerably less than the additive value would be considered, according to recent physical chemical thought,[1] as an indication that considerable dissociation of one or both end members has taken place on mixing. In view of the facts brought out in regard to 0·5 BaO 1 B_2O_3 in VI. and VII., we are led to make a provisional assumption that B_2O_3 alone is a polymerised substance, and in these mixtures is broken down, due to the presence of a base, into more simple molecules.

Likewise the fact that mixtures of borates containing 0·5 molecules of base to 1 B_2O_3 give viscosity values that fall but slightly below the additive value would be taken as an indication that slight dissociation has taken place on mixing.

The conclusions stated under this number (IX.) are given not as a definite contribution to our knowledge of the physical chemistry or borate glasses, but as a possible explanation for the difference in behaviour of the two classes of mixtures.

My thanks are here given to Dr. W. E. Henderson, Professor of Inorganic and Physical Chemistry in the Ohio State University, for many valuable suggestions given during the progress of this investigation.

[1] See Smiles "The Relations between Chemical Constitution and Some Physical Properties," pages 78-79.

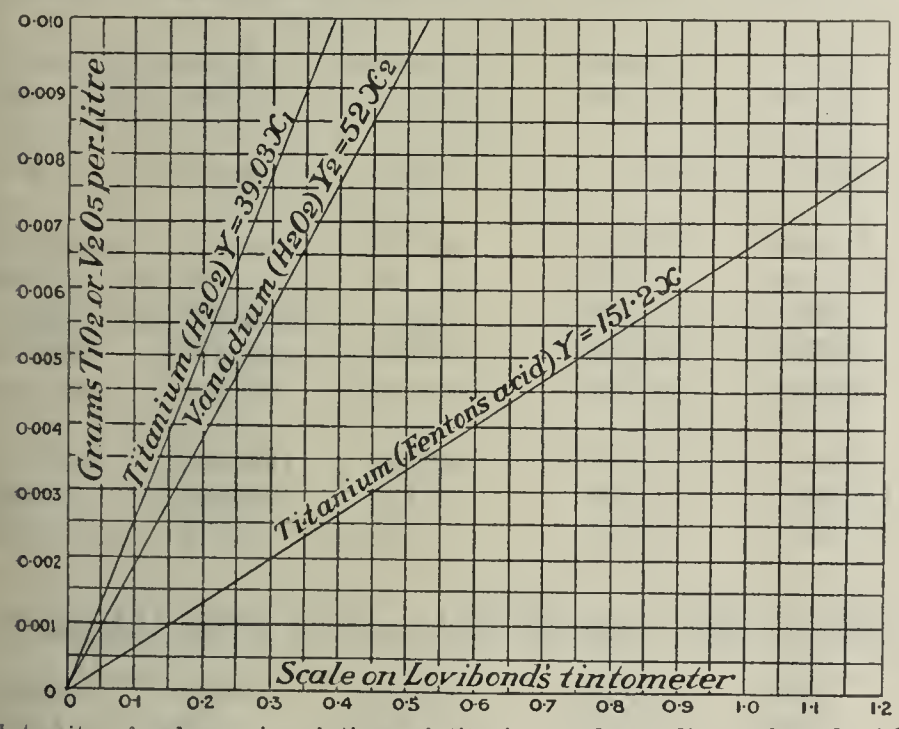
COMMUNICATIONS FROM THE COUNTY POTTERY LABORATORY OF STAFFORDSHIRE.

XLII.—THE SIMULTANEOUS DETERMINATION OF SMALL QUANTITIES OF TITANIUM AND VANADIUM COLORIMETRICALLY.*

By J. W. Mellor.

1.—*Principle of the Method.*†

When dilute acidified solutions of titanium and of vanadium sulphates, coloured by the addition of hydrogen peroxide, are measured in Lovibond's tintometer, and the results with the red rays plotted on squared paper, curves resembling two of the three shown on Fig. 155 are obtained. If titanium solutions are coloured with Fenton's acid‡—dihydroxymaleic acid, $C_4H_4O_6.2H_2O$—the curve also shown in the diagram is produced§. The curves



Intensity of red rays in solutions of titanium and vanadium coloured with hydrogen peroxide and Fenton's acid (1″ trough).

* From *Trans. Eng. Cer. Soc.*, 11.33, 1913.

† This method was developed after reading H. J. H. Fenton, *Journ. Chem. Soc.*, 93. 1,064, 1908.

‡ With more concentrated solutions the curves take on the exponential form $y = ae^{-b.x}$

§ For the colouration of titanium solutions with phenols, naphthols, phenolcarboxylic acids, see O. Hauser and A. Lewite, *Ber.*, 45, 2,480, 1912; V. Lehner and W. G. Crawford, *Inter. Cong. App. Chem.*, 8, 285, 1912.

The reds rays in duplicate experiments are quite concordant, and the readings with dilute solutions do not deviate more than 0·02 on Lovibond's scale—with practice, too, the variations can be reduced to 0·01. The yellow rays are more difficult to manage, because the eye requires more practice to detect differences of the yellow ray. Hence it is better to confine the attention to the intensity of the red ray.

The intensities of the red and yellow tints of mixed solutions of titanium and vanadium are directly proportional to the amounts of each of these elements present in the solution. The colouration of solutions of titanium sulphate with Fenton's acid is not affected by the presence of vanadium; consequently, the intensity of the colour of a given solution of titanium with this acid enables the amount of titanium to be computed graphically from the charts—drawn on a larger scale than the diagram, or from the equation of the curve:

$$y = 151{\cdot}20\ x \qquad (1)$$

where y denotes the intensity of the red ray on Lovibond's scale (with the "inch" trough); and x, the amount of titanium oxide, TiO_2, expressed in grams per litre of solution. It is very important to keep the conditions constant, because the tint is liable to vary with small modifications in the method of work. This is the weakest stage of the process.

When the amount of titanium in the mixture has been so determined, the corresponding value of the red ray on Lovibond's scale can be computed for the hydrogen peroxide colouration either graphically or from the equation of the curve:

$$y_1 = 39{\cdot}03\ x_1 \qquad (2)$$

where x_1 denotes the amount of titanic oxide in grams per litre, and y_1 the corresponding effect on the red ray on Lovibond's scale. Since the intensity of the red ray for the mixed solution of titanium and vanadium sulphates can be determined directly, the effect due to the titanium can be deducted, and the remainder represents the intensity of the red tint produced by the vanadium. The corresponding amount of vanadium can be computed graphically or from the equation of the curve:

$$y_2 = 52{\cdot}00\ x_2 \qquad (3)$$

where y_2 denotes the reading on Lovibond's scale for a solution containing x_2 grams of vanadium per litre—coloured by hydrogen peroxide.*

2.—*Conduct of the Analysis.*

During the analysis of a silicate—say a fireclay—the vanadium and titanium oxides will be found with the iron and aluminium oxides in the ammonia precipitate. This is washed, calcined, and weighed in the usual way. The mass is then fused with eight times its weight of sodium pyrosulphate, and the resulting cake, when cold, is treated by Gooch's process or by ether process to remove the iron. Sodium titanate, aluminate, and vanadate pass into solution; ferric oxide remains behind.† The solution is acidified with sulphuric acid‡ and an aliquot portion—say, one-half—is treated with hydrogen peroxide as is usually done in the titanium determination. The colour of the solution is measured in Lovibond's tintometer. The remaining aliquot part of the solution is treated in a similar way, but about 0·2 gram of Fenton's acid§ is added instead of hydrogen peroxide. Let the solution stand about an hour,‖ and then read its colour in Lovibond's tintometer.

Example:—The "ammonia" precipitate furnished by a gram of fireclay was treated as described above, and the solution made up to 200 c.c. Half of this solution was treated with Fenton's acid and made up to 200 c.c. This solution gave 1·25 red units with Lovibond's tintometer. From equation (1) when $y = 1{\cdot}25$ $x = 0{\cdot}00826$, hence the solution contained the equivalent of 0·00826 gram of titanic oxide per litre; or 0·0033 gram per 400 c.c., or 0·0033 gram of titanic oxide per gram of clay. Again from (equation (2), when $x = x_1 = 0{\cdot}00826$, $y_1 = 0{\cdot}32$; hence, since the combined titanium and vanadium give 0·36 red units, $0{\cdot}36 - y_1 = 0{\cdot}36 - 0{\cdot}32 = y_2 = 0{\cdot}04$; when $y_2 = 0{\cdot}04$, $x_2 = 0{\cdot}00077$ from (3). Consequently, if 1,000 c.c. of the solution contains 0·00077 gram of vanadic oxide, 400 c.c. corresponding with one gram of clay, contain 0·0003 gram of vanadic oxide. Hence, the clay contained:—

Vanadic oxide (V_2O_5)	.. ..	0·03 per cent.
Titanic oxide (TO_2)	.. ..	0·33 per cent.

I am greatly obliged to Dr. Fenton for giving me a fair supply of dihydroxymaleic acid for the above work. There are several questions which want settling when more acid is available.

* The constants in the equation naturally change if a different observation trough is used, and they possibly also vary a little with different observers. The method of computing the constants for the equations is described in J. W Mellor, *Higher Mathematics for Students of Chemistry and Physics*, London, 322, 1909. There is no need to use the equations if careful graphs are drawn, of course on a larger scale than in the above diagram.

† This can be evaluated by dissolving it in acid, &c.

‡ If the solution be not distinctly acid the vanadium does not develop its proper colour; in fact the strength of the acid can be adjusted so that the colour shows with titanium but not with vanadium.

§ The acid is not yet on the market, but it will no doubt soon find its way in commerce. It is best to add the solid as described in the text. Here again, whatever amount of Fenton's acid be used, it should not vary much in different experiments.

‖ The colour develops gradually unless the solution is warmed a little. The rate of change of the colour after standing an hour is slow enough not to interfere with the accuracy of the work.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR JANUARY, 1913.

	Quantities. Month ended January.			Value. Month ended January.		
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY.	1911.	1912.	1913.	1911.	1912.	1913.
To Germany ..... cwts.	4,015	3,206	3,498	£5,101	£5,125	£5,747
,, France ..... ,,	2,251	18,808	10,255	4,930	8,059	11,104
,, United States of America ..... ,,	27,445	22,150	23,643	37,539	30,653	35,265
,, Brazil ..... ,,	25,726	47,699	23,355	17,603	23,537	19,286
,, Argentine Republic ..... ,,	45,036	38,664	39,157	24,469	24,790	31,442
,, British South Africa ..... ,,	11,753	8,153	15,420	11,443	10,881	15,043
,, British East Indies ..... ,,	31,284	47,801	38,282	18,873	24,236	24,306
,, Australia ..... ,,	26,124	27,008	24,397	26,114	27,512	29,404
,, New Zealand ..... ,,	8,519	9,938	7,430	9,174	12,834	10,483
,, Canada ..... ,,	51,950	23,985	47,556	28,018	26,947	38,699
,, Other Countries ..... ,,	92,432	86,743	100,831	63,444	56,483	70,740
MADE UP AS FOLLOWS:						
Porcelain, Chinaware, and Parian ..... ,,	1,583	1,287	1,399	13,805	12,502	14,783
Floor Tiles for Tesselated Pavement ,,	6,871	6,236	7,668	6,790	6,735	7,606
All other Tiles (except Roofing and Street Paving) ..... ,,	11,260	8,581	15,404	10,910	8,331	15,901
Sanitary Ware ..... ,,	25,083	27,620	34,186	35,619	37,391	50,814
Electrical Ware, Door Fittings, and Chemical Ware ..... ,,	10,899	6,242	5,430	3,743	4,348	3,437
Other Earthenware (including semi-Porcelain, and Majolica) ..... ,,	114,150	119,976	128,017	146,137	156,168	170,952
Jet, Rock'm, and Glazed Terra-cotta.. ,,	1,974	194	1,215	1,921	355	1,319
Red, Stone, Brown and Yellow Ware .. ,,	154,715	164,019	140,505	27,783	25,227	26,707
GLASS.						
To British South Africa ..... value £	—	—	—	7,679	9,254	12,161
,, Other Countries ..... ,,				119,648	136,379	153,080
MADE UP AS FOLLOWS:						
Plate Glass ..... cwts.	18,091	19,843	28,590	28,308	32,195	46,630
Flint Glass ..... ,,	6,157	8,814	7,858	19,624	26,768	28,473
Glass Bottles ..... gross	79,253	79,631	83,487	47,330	49,814	48,256
Glass Manufactures, unenumerated .... cwts.	44,755	50,327	53,170	32,065	36,856	41,882

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR JANUARY.

Porcelain, Chinaware, and Parian ..... cwts.	4,378	2,959	3,350	£21,650	£14,513	£16,376
Floor Tiles for Tesselated Pavement ,,	14	—	9	50	—	12
All other Tiles (except Roofing and Street Paving) ..... ,,	6,645	2,575	1,883	2,505	1,763	1,429
Sanitary Ware ..... ,,	29	46	15	51	60	47
Electrical Ware, Door Fittings and Chemical Ware ..... ,,	2,403	2,113	3,177	4,247	3,034	4,936
Other Earthenware (including semi-Porcelain, and Majolica) ..... ,,	16,933	21,146	19,527	33,508	42,171	39,142
Jet, Rock'm, and Glazed Terra-cotta.. ,,	26	4	138	20	30	250
Red, Stone, Brown and Yellow Ware .. ,,	23,702	27,252	30,479	4,541	4,018	6,325
Window and German Sheet Glass ..... ,,	112,779	121,801	124,290	62,224	68,871	70,650
Plate Glass ..... ,,	33,866	29,830	39,555	43,342	37,402	47,328
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass .... ,,	56,677	67,674	79,101	85,743	101,480	108,913
Glass Bottles ..... gross	131,345	147,353	172,746	57,421	64,434	71,900
Glass Manufactures, unenumerated .... cwts.	185	1,953	249	529	1,819	619

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR JANUARY.

Porcelain, Chinaware, and Parian ..... cwts.	1,946	920	1,130	£9,361	£5,108	£6,335
Of all other sorts ..... ,,	649	320	2,014	1,705	739	1,858
Window and German Sheet Glass ..... ,,	1,044	117	561	610	48	331
Plate Glass ..... ,,	262	339	2,200	353	519	2,523
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles) ..... ,,	698	1,114	891	1,744	3,258	3,026
Glass Bottles ..... gross	2,497	3,171	5,973	1,162	1,937	2,960
Glass Manufactures, unenumerated .... cwts.	124	222	137	176	404	92

EARTHENWARE EXPORTS TO THE UNITED STATES.

(Compiled from the Returns of D. Inglis & Co.)

To	Shipments from Jan. 1, 1913, to Jan. 29.	Corresponding Period, 1912.
	Packages.	Packages.
Boston	550	377
New York	730	526
Baltimore	717	769
Philadelphia	196	239
New Orleans.....	64	38
Newport News	21	29
San Francisco	62	97
Portland, Maine	517	128
Galveston	—	75
Portland, Oregon	19	8
Inland Points	104	52
Total.....	2,980	2,338

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c. ; also marked local newspapers.

Mr. Wm. Kent, Wellington-street, Burslem, has appointed as his London agents Hunter Bros., of 94, Hatton-garden, E.C.

Mr. Wm. Ault, of Swadlincote, has appointed F. W. Neuburger & Co., of Gamage Buildings, Holborn Circus, E.C., as his London agents.

The Ashby Potters' Guild, Woodville, near Burton-on-Trent, have removed their London sample rooms to 101, Hatton-garden, E.C., where they are showing some excellent new forms and decorative schemes.

Mr. Albert Lovatt, of Edstone House, Langley Mill, Derby, head of the firm of Lovatt & Lovatt, pottery manufacturers, of Langley Mill, left estate to the value of £28,485, with net personalty £28,268.

Mr. J. W. Baker, glass, china, and earthenware dealer, 136 and 138, Union-street, Aberdeen, informs us that he has been granted a warrant of appointment as china and glass merchant to Her Majesty Queen Alexandra.

The Shops Act.—In the Glasgow Sheriff Court, R. Nicholson, earthenware merchants, 169 Dalmarnock-street, for selling a glass tumbler after 8 p.m., has been fined 10s.——John Campbell, earthenware dealer, 18, Minard-road, Crossmyloof, also for selling a tumbler, has been fined 8s.

British Clay Exports during the month of January were as follows :—China clay, 61,926 tons (£71,077) ; fire clay, 4,960 tons (£4,188) ; other sorts, 3,887 tons (£3,977). Exports for January, 1912, were :—China clay, 46,239 tons (£49,934) ; fire clay, 3,143 tons (£2,634) ; other sorts, 5,765 tons (£4,325).

Clay Pipes for smoking tobacco, and pipes of other materials, are now shown separately in the Board of Trade monthly returns of exports of produce and manufactures of the United Kingdom. Formerly they were included in "Chinaware, &c.—Other Earthenware" and "Other Articles, Class III., O," respectively.

Unemployment Insurance.—The Umpire has decided that contributions are payable in respect of : Workmen engaged wholly or mainly in assembling, finishing or completing pavement, vertical or lead lights or reflectors, whether containing plain or stained glass, for buildings, ships or vehicles, and including all processes of cutting, fitting, cementing, electro-plating, in connection therewith and painting the frames. Also workmen employed by a firm of earthenware manufacturers, and described as fitters and tool filers engaged in repairing tools for use in pottery machinery, and in fixing steam and gas pipes.

Some Successful Sales.—Townsend & Co., of Etruscan Rooms, 54, Northumberland-street, Newcastle-on-Tyne, held their annual sale from Feb. 5 to 26. The opportunities offered to customers were emphasised in an attractive booklet specially prepared for the occasion. Strong inducements to customers were held forth in the form of reduced prices, and the inevitable prospective increase in the cost of pottery was used as a forceful argument in favour of present purchases.——A. B. Pearce & Co., of Ludgate Hill, E.C., held a successful sale during February. characterised by moderate reductions rather than severe price-cutting.

Famous Porcelain Collection Sold.—It is announced that the collection of Chinese porcelain belonging to Mr. George R. Davies, formerly of Forest Hill, Hartford, Cheshire, and now resident in Scotland, has been purchased by Mr. Gorer, of 170, New Bond-street, W. The collection comprises some 600 in number of the finest quality, including what is said to be the finest known famille-verte vase. It is ovoid in form, the background black, decorated on either side with a large panel containing birds on flowering trees. There are also numerous examples of famille-rose. The collection is to be sent to New York, and exhibited there in the beginning of December.

Mr. George Matthey, F.R.S., of the firm of Johnson, Matthey, & Co., Ltd., assayers and metallurgists, 74-81, Hatton-garden, E.C., died at Eastbourne on Feb. 14 at the advanced age of 87 years. His connection with the firm commenced at the age of 19, and he took an active part in the business for 41 years, and continued to show his interest in its affairs until his decease. He made a speeial study of platinum and its commercial application, and discovered a method of obtaining it in a pure state, by fusing the commercial metal with a large excess of lead. Perhaps the most notable work of Mr. Matthey and his associates was the production of pure metals at a price comparable with that of the market qualities—an achievement which has proved of particular value to the industry of pottery decorating.

Price, Powell & Co., Ltd., stoneware manufacturers, were referred to in an interesting paragraph in the centenary number of the "Bristol Times and Mirror" published on Feb. 15. It is pointed out that this pottery firm can claim a longer history than the paper itself. The notice states that "one of the oldest and most successful branches of the potter's art, that of stoneware productions, is still carried on in the heart of the city, where it originated at about the year 1740. At that time there were many small potteries actively at work, and these were gradually acquired by the founder of this business and his successor and consolidated under the name of Price & Sons. With variations in the full title, the firm has consisted of members of the Price family to this day. The latest change was made in 1906, when it amalgamated with the old firm of William Powell & Sons, of Temple Gate, which dates back almost as far as that of Messrs. Price, the firm in St. Thomas-street being now known as Price, Powell & Co."

Old Liverpool Pottery.—On Feb. 12, at the rooms of the Birkenhead Art Club, Mr. P. Entwistle, the deputy curator of the Liverpool Museum, delivered an instructive lecture on this subject. The lecture was illustrated by numerous lantern slides and selected specimens. The lecturer traced the history of the potters' art in Liverpool from the early part of the seventeenth century to the earliest recorded potting at the works of Josiah Poole, in Lord-street, the present site of Bunney's emporium. Numerous potteries were situated in Dale-street, Smith-

field-street, Richmond-row, Shaw's-brow, Islington, Flint-street, Park-lane, Duke-street, Mount Zion (the site of the Cathedral), Cleveland-square, the Old Haymarket, and Harrington-street. It was at Harrington-street that John Sadler and Guy Green first practised their newly-discovered art of transferring prints from copper plates to pottery, an art that has revolutionised the method of decorating, and which continues to the present day. During the course of the lecture the various products of the respective works were fully discussed, and the methods of producing slip, delft, salt glaze, earthenware, and porcelain explained, as well as many points of interest to collectors and connoisseurs of Liverpool pottery.

A Cow in a China Shop.—Mr. Thos. Greenwood, of 81A, King Cross, Halifax, has sent us a cutting from a local newspaper as follows :—"'Though the expression, 'Like a bull in a china shop,' is frequently heard, the unpleasant experience of actually having a bull in a china shop is very rare. On Saturday, however, a King Cross tradesman came very near this, his unwelcome and unexpected visitor being a cow, and it proved a tough 'customer' to deal with. It was being driven from the cattle market to a farm on the outskirts of the town, but when passing through King Cross it was attracted by the large frontage of Mr. Greenwood's china stores, and decided to have a look round inside! So in it went, much to the surprise and consternation of the youth in charge. It calmly passed through the front shop, went up a step to the room behind, through which it marched to the top of the cellar steps, going behind the counter to reach this spot. It hesitated, however, about the descent, and meanwhile its driver arrived. The beast seemed to be stuck fast at the top of the steps, and could not be persuaded to 'back.' Hence the services of several men were requisitioned, and it was decided to draw it out by a side door, its progress thither being a straight course behind the counter. One man jingled a bell in its face to try and frighten it back, whilst others pulled it by the tail and hind legs. There was no room to turn it round, and the task was by no means an easy one. Eventually it arrived on the landing near the side door, and from here its course to the main street was easy. A large crowd collected, and the proceedings were watched with interest. Fortunately, Mr. Greenwood did not sustain any damage, even to the extent of a farthing." Mr. Greenwood, in his letter to us, adds :—"But I should not like it to occur again." We congratulate him on his fortunate escape.

NEW COMPANIES, COMPANY REPORTS, &c.

Braunton Pottery Co., Ltd.—Registered capital, £1,000. Objects, as indicated by title. Private company. Registered office, Braunton Pottery, Braunton, Devon.

Fareham Brick and Tile Co., Ltd.—Registered capital, £3,000 (£1). Objects, as indicated by title, and to adopt an agreement with A. J. Chappell and H. D. Wigdahl for the acquisition of a lease of certain premises at Fareham, known as the Great Beamond Coppice. Private company.

Thomas Webb & Sons, Ltd.—The accounts for the year to Dec. 31 show a profit, including £939 brought down, of £3,958. The directors propose to increase the reserve fund to £12,000 by the addition of £1,500, and pay dividends of 5 per cent. on the ordinary shares and 1¼ per cent. on the deferred shares, leaving £908 to be carried forward.

Patent Interchangeable Stopper Co., Ltd.—This private company has just been registered with a capital of £25,000 in £1 shares, to acquire any invention relating to the manufacture of glass and to grinding glass-bottle necks and stoppers, and the surfaces of other articles, &c. The subscribers are : J. S. Shaw, Rosemont, Huby, near Leeds, glass-bottle manufacturer ; A. E. Shaw, Holly Park, Huby, near Leeds, glass-bottle manufacturer ; and L. N. Bruner, Hotel Cecil, W.C., engineer.

Liens, Debentures, Satisfactions, &c.—Mortlocks, Ltd., London, W.—Registered £5,000 debentures, secured by a trust deed charged on leasehold premises, 31 and 32, Orchard-street, and 466 and 468, Oxford-street, W. ; also by a general charge.——J. & G. Meakin, Ltd.—A memorandum of satisfaction has been filed to the extent of £1,500 of debentures issued pursuant to trust deed securing £60,000.——Fareham Brick and Tile Co., Ltd.—Registered £700 debentures to G. T. Aylen, Chester House, Commercial-road, Portsmouth, charged on leasehold hereditaments at Fontley, near Fareham, benefit of an agreement of agency, and a floating charge over all other assets.

Selfridge & Co., Ltd.—The report adopted at the meeting on Feb. 27 states that the trading results for the year ended Jan. 31, 1913, have been highly satisfactory. The returns have increased practically every trading day of the year over any corresponding day in the history of the business, and substantially every one of the 130 departments has established new records. The net profit for the year amounts to £104,029. To this sum is added the amount brought forward, £8,000 (provided for the accrued dividend on the preference shares to Jan. 31, 1912)—together £112,029—which, after paying the debenture interest and the preference dividend, leaves a balance of £68,360. The directors decided to write off the whole of the underwriting commission on debentures, £20,000 ; to write off depreciation of fixtures, fittings, carpets, &c., £3,557 ; to write off preliminary expenses, £36,803, and to carry forward £8,000 for the accrued dividend on the preference shares to Jan. 31, 1913.

TENDERS ACCEPTED.

For the Bermondsey Borough Council :—Willey & Co., 50 porcelain reflectors, £6 17s. 6d.

For supply of china, &c., to Mount-st. Council school, at Brecon :—Coppage & Son, £18 3s. 6d.

For the Metropolitan Asylums Board :—Molineaux, Webb & Co., Kirby-st., Manchester, glassware (central stores).

The following contracts have been let in Victoria by the Commonwealth or State Governments :—POST AND TELEGRAPH : T. Zwicker & Co., 60,000 porcelain insulators "A" 6·14d., 60,000 ditto "B" 2·4d. ; Dalgety & Co., Ltd., 222,500 porcelain insulators "B" 2⅝d., 135,000 ditto "A" 5¾d. each (for N.S.W.).

CONTRACTS OPEN.

The Uxbridge Guardians invite tenders for the supply of earthenware and glass for 12 months. Forms of tender can be obtained from Mr. C. Woodbridge, clerk, 38, High-st., Uxbridge, to whom sealed tenders should be sent by March 6.

Tenders for the supply of earthenware for 12 months from April 1 are invited by the Staines Guardians. Forms of tender can be obtained from Mr. F. Hutchinson, clerk, Ashford, Middlesex, and should be returned to him by March 6.

Tenders for supply of earthenware are invited by the Worcestershire Asylum, Barnsley Hall, Bromsgrove, for the Visiting Committee. Forms of tender can be obtained from the Steward at the Asylum, and should be returned to Mr. R. J. Oliver, clerk, Shire Hall, Worcester, by March 8.

The Fulham Guardians invite tenders for supply of earthenware to their various London institutions and workhouse at Belmont, Sutton. Forms of tender can be obtained from Mr. E. J. Mott, clerk, 129, Fulham Palace-rd., Hammersmith, and should be returned by March 6.

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

AN INQUIRY FOR YEAST DISHES.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—We should esteem it a favour if you could tell us a name of a firm of earthenware manufacturers who make yeast dishes. These are earthenware dishes in which yeast is exposed for sale in the North of England. We are thinking of placing an order for a quantity of these, but cannot get into touch with firms who make them.—Yours, &c., MERCHANTS [2889].

Feb. 19.

[The address of the writers of the above letter will be given to subscribers or advertisers on application.—EDS. P.G.]

NIGHT EMPLOYMENT OF BOYS IN GLASS FACTORIES.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—In 1895 the employment of male young persons in glass factories was considered; Mr. Asquith, who was then Home Secretary, received a deputation of glass manufacturers, and after full investigation it was decided that 14 should be the minimum age at which boys might commence night work in glass factories. The subject has again been raised in Parliament, and a report of a Departmental Committee has been published, in which it is recommended that the age for employment of "male young persons at night in glassworks be raised to 15 now, and to 16 in January, 1916."

The proposed alteration may appear to be of small importance, but if it is enforced many branches of the glass trade will be seriously crippled. The Committee admits that, owing to the necessity of maintaining glass furnaces at a continuous high temperature, night work is still unavoidable. In order to obtain their training, boys must work with and assist qualified workmen, and their assistance is necessary. Unless, therefore, some new system of working is evolved, men and boys must continue to do part of their work at night.

The term glass manufacture includes many varieties, plate-glass, sheet-glass, bottles, pressed glass, and flint or table glass. The conditions of work are different in each, but the Committee proposes to impose the same restrictions on all. In flint or table glass factories blowing commences on Monday morning and ceases early on Friday morning, so the time from Friday till Monday is free. The glass-blowers work in sets or "shops" of three men and one boy. Each shop works 48 hours in the week, in eight shifts of six hours; the night work therefore, is limited to four six-hour shifts during the week. There is no evidence that these conditions have in any way proved injurious.

The training required in different branches of the trade is different; in some the work is purely mechanical, whereas in those works which endeavour to compete with the glass works of Murano and Bohemia the skill required is of a very high order. The Committee seems to think that "nimbleness and activity" are the only qualities required. The essential qualities are extreme delicacy of touch and extreme accuracy of perception, and every month that the commencement of training is delayed beyond the age of 14 will make the acquisition of these qualities more difficult. At the present time the demand for competent glass-blowers cannot be met. If the age for commencing training is raised, the supply will certainly be still further reduced. The conditions of labour are dictated by the chemical and physical qualities of glass, and yet the Committee does not appear to have sought the advice of any scientific expert as to the practicability of altering a system of working which has borne the test of a great number of years. The Committee refers to a regulation of the trade union which requires that every boy must be apprenticed by the time he reaches the age of 16. This is spoken of as a "very real trouble," but in an experience of nearly 40 years I have never encountered the regulation referred to.

The report throughout bears signs of having been prepared with excessive zeal and with insufficient knowledge. It is satisfactory to find that one member of the Committee, Mr. Waldorf Astor, advises a more detailed inquiry before the recommendations of his colleagues are enforced.—Yours, &c., HARRY J. POWELL.

Whitefriars Glass Works, E.C., Feb. 6.

CORRESPONDENT'S INQUIRY.



B. [4952].—Makers of fine china flower pot, with trade mark as illustrated.

ANSWERS TO CORRESPONDENTS.

F. G.—You must not confuse "crazed" ware with "crackle" or craquelé ware. The former is a "fault" that cannot always be avoided. The latter is an "effect" produced carefully by mixing ingredients in the glaze which are unstable at high temperatures. "Crackle" is really a decoration and not a blemish.

S. W.—We have not come across the "Iceberg" butter coolers made of white porous clay. If you will give us a sketch of one, describing the various parts, we will endeavour to trace the maker for you. It has been our frequent experience to find that articles such as the one you refer to are composed of other material to earthenware (which forms only one of the details), and are put on the market by ironmongers' sundrymen.

J. F.—We cannot trace the maker of the blue Denmark toilet ware from the designs mark you send us sketch of, as our records do not go back so far. The pattern was registered previous to 1884, and up to that time information respecting the proprietors of designs is obtainable only by applying to the Comptroller, Patent Office, Designs Branch, 25, Southampton Buildings, Chancery-lane, London, W.C. A drawing of the design mark will have to be sent with the application, and it is most important that every figure should be correctly copied or the search may be valueless. The fee varies from 1s. to 5s. It is possible after being furnished with the name of the actual manufacturer that you may find him now out of business, or the moulds destroyed, and the fee paid would then be lost.

A Good Imitation.—The "Manchester Guardian" tells how a Bond-street dealer the other day was showing a valuable collection of early Chinese porcelain. The customer picked up one small vase of a beautiful blue, and found it was marked underneath "imitation." Noticing his surprise, the dealer explained: "We always keep that there for purposes of explanation. The other day a fashionable lady came in with a friend and dismissed some of our finest pieces—worth thousands of pounds—in a loud voice as imitations. Suddenly she stopped and said to her friend, '*This* is genuine Ming; I should know it anywhere.' I went up and lifted it and showed her the label. It was the blue vase you have in your hand."

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE Board of Trade "Labour Gazette" for February supplies the following particulars:—

THE POTTERY TRADES.—Employment in the pottery trades, though still good on the whole, was not so good as in December. It was, however, better than in January, 1912.

Returns from firms employing 19,284 workpeople in the week ended Jan. 25 showed a decrease of 0·5 per cent. in the number employed, and of 5·5 per cent. in the amount of wages paid, compared with a month ago; compared with January, 1912, there was an increase of 0·7 per cent. in the number employed, and of 5·9 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	3,158	£3,543
Earthenware manufacture ...	12,116	11,275
Other branches (including unspecified)	4,010	3,654
Total	19,284	£18,472

Districts.	Number employed.	Wages paid.
Potteries	14,431	£13,267
Other districts...	4,853	5,205
Total	19,284	£18,472

In the Potteries employment continued good in the china manufacturing branch; in the earthenware branch it showed a decline on a month ago, but was better than in January, 1912. Earthenware manufacturers in South Yorkshire reported a considerable decline since the beginning of the year.

THE GLASS TRADES.—Employment in January was fairly good on the whole, but showed a decline compared with December. Returns from firms employing 8,146 workpeople in the week ended Jan. 25 showed a decrease of 2·9 per cent. in the number employed, and of 4·3 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 2·1 per cent. in the number employed, and of 4·3 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,947	£8,144
Flint glassware (not bottles) ...	1,656	1,829
Other branches...	543	635
Total	8,146	£10,608

Districts.	Number employed.	Wages paid.
North of England	773	£1,047
Yorkshire	4,876	6,539
Lancashire	565	728
Worcestershire & Warwickshire	973	1,201
Scotland	594	735
Other parts of United Kingdom	365	358
Total	8,146	£10,608

Employment with glass bottle makers in Yorkshire was fair, but not so good as a month ago, except in the flint glass section, where it was good, and better than a month ago. At Barnsley, however, employment was slack, with short time. At St. Helens it was only moderate. Employment was good in the Sunderland district, at Portobello, and at Bristol. At Dublin it was slack. With sheet glass flatteners at St. Helens employment was moderate; with sheet and plate glass workers it was fair. At Birmingham it continued fair with flint glass makers, and good with flint glass cutters and plate glass bevellers and silverers. In the Wordsley and Stourbridge district it was good with flint glass makers and cutters, but not quite so good as a month ago. With pressed glass makers on the Tyne and Wear employment was slack, and worse than a month ago and a year ago. With glass blowers in London it was fair.

FUSIBILITY.

(SPECIALLY TRANSLATED.)

FOR regulating or determining the fusibility of keramic bodies, Kochs and Seyfert have drawn up formulæ which are intended not only to deduce the fusibility of a silicate from its chemical composition, but also, inversely, what components and what quantity of same must be added to a given silicate in order to obtain the desired modification in the fusibility of the body. The results are set forth in the "Sprechsaal Kalendar" in the following six formulæ:—

Let q represent the quotient of fusibility, K the percentage of silica (SiO_2), T the percentage of alumina (Al_2O_3); A, B, C, . . . N, the percentage of the constituents acting as fluxes; Ma, Mb, Mc . . . Mn, the molecular weights of the fluxes in question, and F an abbreviation of the expression:—

$$\frac{A}{M\,a} + \frac{B}{M\,b} + \frac{C}{M\,c} \quad . \quad . \quad . \quad . + \frac{N}{M\,n}.$$

Then the quotient of fusibility q will equal

$$\frac{T^2}{173{\cdot}4\,FK} \qquad (1)$$

If, to a silicate of known percentage composition, it be desired to add x parts of alumina per 100 parts of silicate, in order to produce the same degree of fusibility as that of another silicate having the quotient q, we have then:—

$$x = \pm\sqrt{173{\cdot}4\,p\,FK - T} \qquad (2)$$

If, on the other hand, an addition of y per cent. of silica be desired, use is made of the formula:—

$$y = \frac{T^2}{173{\cdot}4\,q\,F} - K \qquad (3)$$

If both alumina and silica are to be added, and at the same time the molecular ratio between alumina and silica is to be $l : v$, then x and y have the following values:—

$$x = 102\,q\,v\,F - T \qquad (4a)$$

$$y = 60\,q\,v^2\,F - T \qquad (4b)$$

When pure alumina and silica are not available for improving the fusibility of a silicate, but only an aluminiferous silicate, the following calculations are applicable:—Let K and T represent the percentages of silica and alumina in the materials to be improved; K′ and T′ those in the material to be added; a' and b' the percentages of the fluxes in the latter; then the quantity of added material needed to produce the desired quotient q will be x per cent.

The formula is:—

$$173{\cdot}4\,q\,FK - T^2 = x^2\,T'^2 - 173{\cdot}4\,q\,F'K' + x[2\,TT' - q\,173{\cdot}4\,(F\,K'\,F'\,K)] \qquad (5a)$$

By substituting r for the left side of the equation, S for the factor of x^2, and t for that of x, we have $r = x^2\,S + xt$, and therefore—

$$x = \sqrt{\frac{r}{S} + \frac{t^2}{4\,S^2}} - \frac{t}{2\,S} \qquad (5b)$$

When a definite quantity of flux is to be added to a silicate of known composition, in order to obtain a certain fusibility, q, then the necessary percentage will be repre-

sented by z, and the molecular weight of the flux by m_z. The formula will be :—

$$z = m_z \left(\frac{T^2}{173{\cdot}4\ q\ K} \right) \qquad (6)$$

The figure 173·4 in this formula is the result of squaring the molecular weight of alumina and dividing the product by that of silica :—

$$\frac{102 \times 102}{60} = 173{\cdot}4.$$

If, however, the exact figures for the molecular weights be taken, viz., 101·96 and 60·22 respectively, the result works out to 172·63 ; but the difference is very small.

As examples of the quotient q, the following values have been determined :—

Fireclay, class 1	11·209
,, ,, 4	3·064
Material of Seger cone 20	0·397
Potash felspar	0·153
Material of Seger cone 10	0·101
,, ,, ,, 1	0·0187
Potash-lime glass	0·00004

OLD RECIPES FOR GLASS METAL.

(SPECIALLY TRANSLATED.)

EVEN as the glass industry itself has sustained essential changes, so also have the recipes for glass metal. The following, taken by Bruhn's "Fachblatt" from the recipe books of old Brandenburg and Pomeranian glassmakers, afford an interesting insight into former methods of working. The quantities of the charges are small as compared with present-day practice, because the furnaces used could not accommodate more than six pots of no great dimensions. Another feature not devoid of interest is that the old workers, although using primitive appliances and lacking the sources of information now available, were able to produce articles of high quality, especially in coloured glass ware.

CLEAR GLASS.—(1) Sand 90 lbs., potash 30, chalk 15 to 20, arsenic 1½ lbs., manganese dioxide 1 oz. (2) Sand 126 lbs., soda 40, potash 5, chalk 20, arsenic ½ lb., manganese dioxide 2 oz., antimony 2 oz., nickel ore ⅛ dram. (3) Sand 300 lbs., soda 115, chalk 60, saltpetre 4½ lbs., manganese dioxide 2 oz., antimony 1 oz., cobalt oxide 2 drams.

CLEAR GLASS : BETTER QUALITY.—(1) Sand 100 lbs., potash 20, soda 20, chalk 18, saltpetre 1, red lead 1, arsenic 1¾ lbs., manganese dioxide 2 oz., tin salt 2 oz., nickel ore ⅛ dram. (2) Sand 100 lbs., soda 30, potash 15, chalk 20, arsenic 1¾ lbs., red lead 6 oz., manganese dioxide 2 oz., antimony 3 oz.

CUT GLASS.—(1) Sand 80 lbs., potash 20, chalk 12, red lead 6, saltpetre 2 lbs., arsenic 4 oz., manganese dioxide 1 oz., antimony 1 oz. (2) Sand 160 lbs., soda 54 lbs., manganese dioxide 13½ oz. Pigment for No. 2 :—Sand 6 lbs., saltpetre 1½, borax 1½ lbs., nickel oxide ¼ lb. This mixture was fritted and 3 oz. were used to the charge No. 2.

OPAL GLASS.—Sand 125 lbs., potash 50, arsenic 4, saltpetre 6 lbs. To this was added a mixture of salt 6 lbs., soda 6, bone 36 lbs., and manganese dioxide 2 to 4 oz., calcined, powdered, and passed through a fine sieve.

PINK GLASS.—Gravel 50 lbs., red lead 24, saltpetre 10, borax 4, potash 3 lbs., arsenic 6 oz., 6 to 8 ducats and an equal quantity of tin.

ALABASTER GLASS.—Sand 150 lbs., potash 50, saltpetre 15, bones 13, chalk 6 lbs.

STEEL GREEN GLASS.—Sand 2 lbs., potash 1, chalk ½ lb., copper ash 7 oz., red lead 1½ oz., borax ½ oz.

ENAMEL FOR EDGES.—Sand 30 lbs., potash 4¼, bone 3, arsenic 6, clear cullet 20 lbs.

GREEN AND BLUE GLASS.—Sand 36 lbs., red lead 28, bone 36, soda 9, cullet 30 lbs. For blue, ½ lb. of cobalt oxide was used, and for green 12 oz. of chromate of potash, 9 oz. of copper ash, and 1 oz. of zinc oxide.

BLACK MEDICINE GLASS.—Sand 5 lbs., soda 3, glass spilt in the furnace 8, manganese dioxide 5, blue cullet 2, bone ¼, iron ⅛ lb.

BROWN : BOTTLE GLASS.—Sand 50 lbs., soda 20, wood ashes 20, lime 5, crumbled glass 100 lbs., oats 2 quarts.

SEMI-WHITE TABLE GLASS.—Sand 158 lbs., Glauber salt 100, lime 20, wood charcoal 10½ lbs.

YELLOW TABLE GLASS.—Sand 160 lbs., potash 60, soda 30, lime 16, birch charcoal 2, arsenic 1 lb.

BLUE TABLE GLASS.—Sand 150 lbs., Glauber salt 85, smalt 22, lime 12, charcoal 5, manganese dioxide 4, red lead 2, arsenic 2 lbs.

VIOLET TABLE GLASS.—Sand 95 lbs., potash 40, soda 10, lime 10, smalt 8, arsenic 1 lb.

SKY BLUE GLASS.—Sand 100 lbs., potash 60, bone 24, lime 6, cobalt ¾ lb.

TURQUOISE BLUE GLASS.—Sand 120 lbs., potash 60, bone 4, cobalt 1½, copper ash 1, arsenic 1 lb.

For colouring glass red, 1 to 2 per cent. of cuprous oxide and an equal quantity of cream of tartar were used, tin oxide being added. Thus, to 160 parts of glass metal, 2½ parts of tin oxide and 2½ parts of cuprous oxide were taken, the latter being sometimes replaced by copper sulphide. To impart a more scarlet tinge to the glass, 2 per cent. of tin oxide and 15 per cent. of ferrous oxide were employed, the use of arsenic, manganese, and saltpetre being avoided as tending to transform the protoxide into the green oxide.

Foreign Notes.

Glass and Glassware to the weight of 35,360·8 metric tons was imported into France last year. The figures show a steady growth.

Hollow Glassware, of natural colours, to the weight of 105,650·9 metric tons was exported from Germany last year. The figures show a marked increase.

Earthenware and Pottery of common varieties to the weight of 136,382·9 metric tons was imported into France during last year. The trade is growing apace.

Pottery for Premiums.—An American grocery trade paper, recently received, contained an advertisement of a china dinner service, not for sale, but to be given in return for a certain number of provision coupons.

The American Ceramic Society held their 15th annual meeting at Washington, D.C. from Feb. 25 to 28. We have been favoured with an advance copy of the programme, which shows that the proceedings promised to be of a very interesting nature.

New York Pottery Importers Released.—In last month's issue we announced that criminal proceedings had been instituted against the officers of L. D. Bloch & Co. for violation of the Customs Law. The books of the firm have been examined by the Government accountant, who report as follows :—"The importation of French china and invoices were examined and verified with the amounts credited to the various manufacturers of Limoges. Payments were made for these invoices by the Credit Lyonnais of Limoges, and all payments appearing on the books of L. D. Bloch & Co. were verified. As far as we were able to ascertain no payments in addition to the amounts represented by the invoices were made." The legal proceedings have consequently been dropped.

Fragments.

¶ A final notice as to our Prize Competition appears on p. 265, embodying the replies to various queries which we have received. The competition is attracting much attention, and we are expecting a good number of entries, which should be sent in promptly

* * *

¶ The following rhyme concludes a piece called "The Potteries," in a recently published book of verse :

"The People of the Potteries
Make useful things with skill and ease ;
But O, if I had learnt the trade,
What curious things I could have made !—
A little house with chimney-pots,
A little dog with yellow spots,
Tobacco jars (so good for presens)—
Instead, they've made me stick to lessons."

It is to be hoped that the writer would work better with clay than with words, otherwise the product would be rather shaky.

* * *

¶ A passage in the Editorial Note on the Shops Act (p. 263) suggests a heartrending picture of Mr. Tacks, the ironmonger's assistant, being compelled to remain at work while his sweetheart, Miss Silk, the young lady in the drapery shop, goes off for a half-day's holiday with young Tape from the ready-made department. We trust that the youths and maidens in the pottery and glass shops may find no such obstacles, but that the Act will help the course of true love to run more smoothly than ever.

* * *

¶ Manufacturers will be interested to note the precautions taken in the Italian Potteries to safeguard the health of the workers, as shown in the illustrations on pp. 280, 281. We refer particularly to the use of tongs for dipping and to the ventilated chamber for spraying.

* * *

¶ A Noble Potter.—The "Liverpool Post" has the following :—King Humbert once visited Florence, and at a reception of the aristocracy inquired of each noble presented what his occupation was. "Nothing, your Majesty," was the uniform reply until it came to the turn of the Marquis Ginori, who had lost caste somewhat because of his manufacture of pottery. "I am a potter, maesta—a maker of majolica," said the marquis in response to the King's question. "Thank God," cried the King, "there is one noble in Florence who does something." In Germany we suppose the noble marquis would have been prosecuted for "lèse-majesté" as a competitor of the Kaiser's own pottery at Cadinen.

* * *

¶ Here is an ingenious argument in favour of "advertisement's artful aid," compiled by the "Practical Printer":—Back to Nature.—A hen is not supposed to have much common sense or tact, yet every time she lays an egg she cackles forth the fact. A rooster hasn't got a lot of intellect to show, but none the less most roosters have enough good sense to crow. The mule, the most despised of beasts, has a persistent way of letting people know he's around by his insistent bray. The busy little bees they buzz, bulls bellow and cows moo, and watch-dogs bark, and ganders quack and doves and pigeons coo. The peacock spreads, his tail and squawks ; pigs squeal and robins sing, and even serpents know enough to hiss before they sting. But Man, the greatest masterpiece that Nature could devise will often stop and hesitate before he'll advertise !

"Ceramicus."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(from our own correspondent.)

MR. TONMAN MOSLEY, the chairman of the North Staffordshire Railway Company, at their recent half-yearly meeting, said: "I am afraid the outlook is not so promising. Trade seems to be rather on the downward grade ; in fact, our information leads us to believe that what we call the 'boom' has already gone by." This was a rather pessimistic statement, and most business people in the Potteries not only hope, but believe, that he was taking too gloomy a view of the year's prospects, and that although there must inevitably be an end to the "boom," the time is not yet come. Nevertheless, Mr. Mosley had some justification for his lack of optimism if the immediate condition of local trade is an indication of what lies ahead, though everyone trusts it is not. The returns of the Railway Company have of late shown a marked decline in goods train traffic, and also a decrease in aggregate receipts, and this is a reflection of the general opinion that the home trade—to deal with that department first—is not opening out as most manufacturers anticipated it would. The business to hand during the first few weeks of the year was generally somewhat above the average for January, but the orders coming in at the end of February do not reach expectations, and the general state of the home demand is regarded as disappointing. The same view is expressed, not only with regard to general earthenware, but also china and jet and rockingham. The two latter sections of the industry are, of course, mainly dependent upon home consumption, whereas the earthenware manufacturers mostly have the advantage of oversea trade to compensate them.

This dulness is variously accounted for. One explanation given is that of advanced selling prices, but this can hardly be sufficient. True, the china manufacturers are endeavouring to maintain their 15 per cent. advance, but this was in operation nearly twelve months ago, and earthenware manufacturers in some instances have imposed very slight advances. On the other hand, however, the prices in the jet and rockingham trade are the same as obtained twelve to eighteen months back. The explanation of advanced prices is, therefore, not an adequate one. A more likely reason is that dealers accumulated rather heavy stocks during the busy period at the end of last year, and did not find sales so brisk as they anticipated. Yet, another explanation, which will in part account for the present lack of buoyancy, is that the existing state of trade throughout the country is not so firm as it was. For instance, most departments of the great iron and steel industries of the kingdom are just now finding a decline in new business, and, of course, it has to be remembered that the greater trades necessarily influence the lesser. But, while this dull tone undoubtedly pervades the home market, there is no reason to anticipate that a sudden collapse will occur (always excepting an international crisis), or that there will not be a considerable revival shortly. That is certainly anticipated by most manufacturers, and as one remarked to me the other day, they must in the meantime "sit tight" and not flood the market with goods at low prices. Some of the largest manufactories are very busy, particularly those

making high class earthenwares, but their activity is chiefly due to the export demand, as to which there appears to be little complaint.

The Colonial trade generally is buoyant, and a satisfactory feature is the somewhat improved demand from the United States. This certainly should continue and develop, for the reports as to the crockery business in America are all to the effect that abnormally good trade is being enjoyed there, the demand having set in much earlier than usual. It is said that English goods are moving freely, the higher grades being in excellent demand. This should mean a better supply of orders for our manufacturers, and almost seems to indicate that the long-looked-for improvement in the United States trade is coming at last. It does not, however, do to be too confident in this connection. One thing which should tell in favour of English manufacturers, who have had to increase their selling prices in order to meet their advanced production cost, is that the price of wares generally in America has been advanced by about 5 per cent., despite which retailers are said to be buying briskly, ignoring political influences and foreign disturbances. With regard to the tariff question, the statement by Mr. Underwood (chairman of the Ways and Means Committee of the House of Representatives), referred to last month, to the effect that the Committee was in favour of retaining the tariffs of 55 and 60 per cent. now in operation, does not appear to be the end of the matter. The opinion in the American potting trade, however—according to United States journals—is that the import duties will be very little, if at all, reduced. One American newspaper, under date Feb. 6, makes the statement that the majority of the Committee of Ways and Means had agreed on radical reductions in the duties on "chinaware and glass ware of the cheaper varieties," but what reliance can be placed on the statement, or what it exactly means, I am unable to say. At any rate, much has to happen before the Tariff Bill is introduced at the extra session of Congress to be called soon after the beginning of the Wilson administration. Moreover, if the tariff on the cheaper varieties of "chinaware" were reduced, it would be of small advantage to English manufacturers, for the quantity of cheap china going to the States from the Staffordshire Potteries must be quite negligible.

The value of the January exports, as revealed by the Board of Trade returns, was at the satisfactory level for the opening month of the year; indeed, it was actually above the average for the past twelve months. The total was £291,519, as against £251,057 in the same month of 1912, and £246,708 in 1911. It was, too, substantially better than in December, the aggregate for the month being £284,495. On the other hand, the quantities again show a disparity, the weight of the January exports being 333,824 cwts., as against 334,155 cwts. in the same month of 1912, and 326,535 cwts. in 1911. It is, therefore, obvious that the advanced selling prices account for a considerable part of the increased value of the oversea trade, and that the actual bulk of business was not so great as the value figures would indicate. The Canadian trade was the best feature of the month, the value—£38,699 being nearly £12,000 better than in the corresponding month of last year, and over £5,000 in advance of December. The American business also realised a more satisfactory figure, the total reaching £35,265, or £4,600 over January of 1912, and nearly £10,000 better than in December. The aggregate of the South American turnover was rather better than in the same period of last year, but less than in December, which was an exceptionally good month for those markets. Two good features of the January trade were the better business with South Africa, the total of £15,043 being over £4,000 better than a year before; and a revival of trade with France, the figure of £11,104 being £3,000 over the total for the same month of last year. An examination of the figures relating to descriptions of ware shows an interesting fact. The increase in the earthenware exported as compared with the same period of last year was £14,784; the increase in sanitary ware was £13,423, which comparison indicates the increasing oversea markets for English sanitary goods. The January imports were of the value of £68,517, as compared with £65,589 in January, 1912, and £66,572 in the same month of 1911. The inference is that though the imports had increased in value, they had not advanced in the same proportion as the exports. The re-exports for the same periods were £8,193—£5,847—£11,066 respectively. The net value of the imports in January was, therefore, £60,324.

I was able to announce last month that a new gross price-list for export goods had been issued by members of the Manufacturers' Association, and it is believed that as a result of the agreement entered into a uniformity of prices will be maintained in regard to staple lines for oversea markets. The committee, which was also appointed to consider the question of selling prices in regard to the home earthenware trade, has since met, but no decision has as yet been arrived at. The questions involved are very difficult of solution, in view of the great varieties of goods, the innumerable patterns and shapes, and the many specialities made by different firms. In the meantime, however, certain individual firms have issued new price-lists on their own account, including in the figures charged the cost of packing and packing material, and it is not unlikely that more will find it of advantage to follow suit. Advanced prices must be maintained if manufacturers are to recoup themselves for the ever-increasing cost of materials and other things which go to make production more expensive. Only last month I mentioned the further increase of 5 per cent. in miners' wages, meaning another 6d. per ton on new contracts for coal, and since then the announcement has been made of an application for yet another 5 per cent. on the wages of underground workers at collieries, which, if granted, will raise them to the maximum of 65 per cent. over the basis wage, and doubtless result in a further burden on the consumer. On this subject of increased selling prices a manufacturer remarked to me last week that there ought to be an advance, especially on those lines which are unaffected by foreign competition. "The ridiculous thing," he added, "is that those goods are just the ones on which internal competition is the keenest."

In accordance with the custom that has been in existence for a number of years, notice has to be given six weeks prior to the Potters' Settling Day, March 25, of any advance or reduction that may be desired in wages or prices by operatives or employers. In 1911 the flat pressers and hollow ware pressers obtained a 5 per cent. advance; and twelve months ago notices were given for a number of increases, as a result of which ovenmen obtained an advance of 3d. per day to 5s. 6d., and printers and transferrers 5 per cent. On this occasion the notices given are few in number and of less importance than usual. In the general earthenware trade only a few individual notices for advance in prices have been handed in. In the jet and rockingham trade, jiggerers, turners, and handlers are asking for a half-penny per dozen advance on rockingham teapots. In the general sanitary trade no notices have been given, but six firms engaged only in the

manufacture of "cane and white" sanitary ware have received applications fo advance in prices from their operatives. In the tile industry two firms are applying for reductions, and the workers have submitted counter-claims for advances. No serious difficulty in settling the points in dispute is anticipated.

The new Regulations are giving many manufacturers an anxious and troublesome time, for compliance with them is likely to be a matter of no little difficulty in very many cases. They have now been adopted by the Home Secretary, and are nominally in operation, but presumably they will not—as a matter of fact, cannot—be enforced for some time to come, seeing what they involve; for instance, in structural alterations alone. Some of the most up-to-date factories will comply as to construction with most of the rules, but many, even of the more important, will have to be considerably altered and re-arranged, whilst in the case of the smaller and old-fashioned works the problem is extremely serious. The carrying out of the detailed requirements for the daily cleaning of shops (including drying stoves), which have to be provided with impervious floors or wooden floors capable of being cleaned by a moist method, will involve no little difficulty and expense in alterations. Then, in addition, clothes cupboards or rooms have to be provided; lavatory accomodation has to be extended, including the supply of both hot and cold water; and mess-rooms have to be arranged for and furnished, if not already provided. Every working place has to be thoroughly ventilated; and, further, quite a number of processes, including tile-pressing, cannot now be carried on without the use of an efficient forced draught. The problems that the installation of fans and the arrangement of ducts will involve will be many and difficult of solution, apart from the initial expense and the cost of subsequent maintenance. These are only some of the requirements affecting the structure of factories, and take no account of the many others, such as the provision of food for lead workers, restrictions applying to various processes, &c. It is estimated that structural alterations and additions will cost in the Potteries district not less than £50,000, and some estimate that anything up to £100,000 will be spent before all the works are put in a state such as will satisfy the Rules.

Occupiers of old-fashioned factories, held on lease, will be hard hit, and lengthy negotiations of an anxious character are likely to ensue with the owners of the property. A tenant may point out to a landlord that his works are unfitted for his business, in view of the new Regulations, and it will be quite open to the landlord to reply—particularly in view of the present day disinclination to further invest in property—that that is none of his business, and that all he requires is the rent which the tenant has covenanted to pay. Possibly the lease has only three or four years to run, and then the manufacturer will be in an awkward case. If the owner of the property persists in refusing to carry out the necessary improvements, the tenant will have one of two alternatives—spending a considerable sum on some other person's buildings, which he may have to vacate at the end of a short period, or purchasing the works. The latter alternative may, moreover, prove a matter of difficulty, for he may not, in the circumstances, be able to make a satisfactory bargain. On the other hand, if the landlord consents to carry out the necessary alterations, the tenant will have to take the works on a new lease, and in view of the tenant's position it will be quite possible for the owner to take advantage of it in fixing the new rental. A case was recently quoted to me of a manufacturer whose lease expired in four years. After a great deal of trouble he managed to arrange a purchase, but he had to pay for the works—I was informed—half as much again as he would have had to pay three or four years ago. Since acquiring the property he had spent £1,500 on structural work, and he estimated that he must disburse another £500 before he had put the factory in a condition to comply with the new Regulations. In the case of old, rambling works the proposition is a big one, and it is not unlikely that some of the smaller manufacturers may find it impossible to comply with the Rules. Even in the case of those more fortunately placed, this new legislation will result in enhanced working cost, and possibly decreased output.

The programme of the Royal visit to the Potteries, in connection with their Majesties' stay at Crewe Hall, as guests of the Marquis and Marchioness of Crewe, has been submitted to Lord Stamfordham, the King's Private Secretary, and until it has been finally approved the details are not available. It is, however, known that the King and Queen will arrive at Crewe Station on the afternoon of Monday, April 21, and after being presented with a loyal address from the Mayor and Corporation, their majesties will proceed to an inspection of the great engineering works of the London & North-Western Railway Co. Thence they will motor to the Cheshire County Dairy Institute, at Worleston, and return through the town to Crewe Hall. On Tuesday, April 22, they will visit North Staffordshire, arriving at Newcastle-under-Lyme, and then passing on to the County Borough of Stoke-on-Trent, in which the greater part of the day will be spent The Mayors of the two towns and other prominent personages will be presented, but there will be no presentations of addresses. It is understood that their Majesties will motor through each of the six towns of the Potteries, and visit several factories, and they will probably lunch with the Mayor and Mayoress of Stoke-on-Trent (Ald. and Miss Geen), at Cliffeville, Hartshill. The expected visit to the North Staffordshire Infirmary is now unlikely to form part of the programme as the proceedings are to be of an informal character throughout, and to consist mainly of an inspection of industries. On April 23, Wednesday, the King and Queen will proceed to Leek, her Majesty, in particular, being greatly interested in the silk industry, and desirous of seeing some of the factories of that town.

When it is pointed out that in 1911 213,280 tons of potters' materials were imported into the district by canal as against 37,810 tons brought by rail, it will be realised how important it is that the waterway between the Mersey and the Potteries should be maintained, and how serious a matter is the possibility of any interruption. The reasons for the uneasiness existing amongst the business men of the district are the state of disrepair into which the "new" Harecastle Tunnel has fallen as the result of mining operations, and the fact that the closing of this underground waterway would almost stop canal communication with the Potteries. The question is quite apart from the proposal to provide a more commodious waterway between the Mersey and North Staffordshire, though if the railway company would do as the Chamber of Commeree urge, and construct a deviation canal, the latter would become part of the greater scheme should it eventually be carried into effect as was explained in these notes last month. Mr. H. Boddington, who is admittedly an authority on the question of canals, said at the meeting of the North Staffordshire Chamber of Commerce, on Feb. 12, that it would be simply impossible to work all the traffic through the old tunnel, and the result would be a very considerable difficulty in obtaining supplies

of materials for the Potteries. The alternative of putting them on the rails naturally suggests itself, but this solution is largely discounted when it is pointed out, as was done by Mr. Boddington, that the Mersey Ports, with the exception of Ellesmere, have been laid out chiefly for water traffic, and do not offer facilities for the dispatch of materials by rail. For instance, the Weston Point Docks of the Weaver Navigation are situated two miles from the nearest railway station, so that carriage by railway from those docks would be impossible. As a matter of fact, it is estimated that should the larger tunnel, which is now endangered, be closed, it would not be possible to get through by canal half the materials now brought into the district.

Since last October correspondence has been passing between the Chamber of Commerce and the North Staffordshire Railway Co., who own the Canal, the effect of the company's communications being that they have abandoned the idea of applying for Parliamentary powers to construct the deviation canal. They urge that in view of the proposals of the local Waterways Committee, Parliament would not grant them such powers ; that the expenditure entailed would be such as would not be reasonable to ask the shareholders to undertake ; that the deviation canal could not be completed under ten years ; that repairs to the existing tunnel would be necessary in any event, if it were to be kept open ; and that, in view of a recent judgment in the House of Lords, it is unlikely that future mining operations will interfere further with the tunnels. Their proposal, therefore, is to carry out extensive repairs to the tunnel, upon which they have obtained expert advice. Mr. Tonman Mosley, the Chairman of the North Staffordshire Railway Co., at the half-yearly meeting of the company said the estimated cost of the avoiding route was so high that they did not feel justified in contemplating it. Moreover, expert opinion had since been received, and the Howley Park Tunnel case had also been decided in the House of Lords. The advice of their experts, Mr. G. R. Jebb, of the Birmingham Canal Navigation, and Mr. Gordon Thomas, of the Grand Junction Canal, was to put the Harecastle tunnel in order in preference to making an avoiding route. They were now acting on the advice given, and had several schemes under consideration for giving better head-room and improving the "new" tunnel at Harecastle. They believed that this could be done without any abnormal stoppage of traffic, and that there would be really less delay than if they had undertaken the construction of an avoiding route.

The contention of the Chamber of Commerce, as voiced by speakers at the special meeting on Feb. 12, is that some stoppage of the tunnel is essential if the renovation is to be of a permanent character, but that if the deviation scheme were put in hand the tunnel could be temporarily and sufficiently patched by doing the work at week-ends and other times, so avoiding any closing of the waterway. Moreover, it is urged by them that the "avoiding" canal could be cut in two and a half years, and not ten years, as stated by the company ; and, further, that a considerable return for the expenditure involved would be forthcoming in increased tolls, which the users of the canal would be prepared to pay, and in the saving of cost of repairs. The case for the deviation canal was well put at the meeting of the Chamber by Mr. F. W. Morton, of Fellows, Morton & Clayton, carriers, of Birmingham, who estimated that the diversion could be made for £250,000 or £300,000, and said that as carriers on the canal they were not adverse to paying an increased toll to help to provide the interest on the outlay. That increased toll and the saving which would be effected in repairs to the existing tunnels would, he estimated, provide something like two-thirds of the interest on the capital required. That would do away with the monetary difficulty. Mr. Morton also outlined an alternative scheme. which, however, Mr. Boddington did not favour. It was that, instead of making the very deep cut which the railway company's own engineer first proposed, they should surmount the summit of the hill by means of a series of five locks on either sido. In regard to this scheme, he urged that it was perfectly feasible from the engineering point of view, and that the cost of pumping tho water to the locks would be comparatively small. Mr. Morton contended that the doviation canal could be cut in two-and-a-half years, or, if they adopted the alternative scheme suggested by him, the work could be carried out in a year and a half, given favourablo weather. He would undertake to find a contractor to do the work.

Amongst the letters read at the Chamber of Commerce meeting was one which the Trustees of the Weaver Navigation had addressed to the Board of Trade on the subject. The Trustees control the waterway from Weston Point Docks to Anderton, a distance of thirteen miles, at which point their traffic is transferred to the Trent and Mersey Canal by the boat-lift, and they had pointed out to the Board of Trade the serious interference which would result to their traffic from the closing of the Harecastle tunnel. They accordingly asked the Board of Trade to urge upon the North Staffordshire Railway Co. "the necessity, not only for making adequate temporary provision forthwith for the traffic in the event of the possible sudden collapse of the tunnel, but also for making the necessary preparations with a view to commencing the construction of the alternative route, in view of the fact that there can be no guarantee that any repairs which may now be dono to the tunnel will be effective, as long as unworked coal remains in the vicinity." The communication of the Weaver Trustees was stated to have absolutely put the case of the Chamber ; and accordingly, on the motion of the President (Mr. H. Boddington), seconded by Mr. John Ridgway, the following resolution was passed :—

> That this Chamber, having read the letter of the Weaver Navigation Trustees to the Secretary of the Board of Trade, under date the 7th inst., respecting the Harecastle Canal Tunnel of the North Staffordshire Railway Co., entirely concurs with the request contained in the last clause of the letter, and urges the Board of Trade, under the very important and exceptional circumstances, to press the North Staffordshire Railway Co. to proceed with the deviation canal, and, in the meantime, to make such arrangements as will enable the present canal traffic to be carried on until the new works can be ready.

The large volume of trade which was turned over in North Staffordshire during the second half of last year is shown by the report presented at the half-yearly meeting of the North Staffordshire Railway Co., held on Feb. 11, but Mr. Tonman Mosley, the Chairman, pointed out that this only made up for the losses during the coal strike. Merchandise carried by the company during the half-year amounted to 897,709 tons, as against 877,705 tons in the corresponding period of 1911, whilst the receipts from merchandise totalled up to £165,380, as against £151,612, an increase of £13,768. There were carried by canal 549,144 tons, as compared with 541,500 tons ; and canal tolls amounted to £27,416, as compared with £25,841, an increase of £1,575. The total receipts of the company were £567,186, an increase of £35,476. The working

expenses reached a total of £353,975, an increase of £31,914. The company was able to declare a dividend on the ordinary stock at the rate of 5 per cent. per annum, the same rate as for the corresponding period of 1911. The dividend for the whole year, however, worked out at 4⅜ per cent., as against 4¾ per cent. for the previous year. The sum carried forward was £10,381, as compared with £10,590 the year before.

It will be recalled that in March of last year the Light Railway Commissioners, after an inquiry held at Stoke, granted powers to the North Staffordshire Railway Co. to construct a light railway from Trentham Park Station through Trent Vale, Newcastle-under-Lyme, and Knutton to Silverdale. This railway, it is expected, will open up considerable building estates, and be of advantage both to passengers and to the industries on the western side of the Potteries area. During the month the Commissioners have held a further inquiry to consider the expediency of granting an application by the company to amend the Order, already made, by closing the greater part of the Newcastle Canal. This canal, constructed 120 years ago, follows the route of the main road from Stoke to Trent Vale, and then, turning to the right, accompanies the high road from Trent Vale to Newcastle. The application was for power to close the canal from Nursery-street, Boothen, to Newcastle. It was explained that the application was made on the grounds that the railway company found the cost of the light railway scheme and the engineering difficulties excessive. The cost of the light railway was estimated at £90,000, but by closing this portion of the canal, diversion at two points would be avoided, and a sum of approximately £10,000 would be saved. The traffic on the canal had been diminishing since the Newcastle and Silverdale Railway was opened in 1856, and at present was almost of a negligible quantity. The traffic amounted to one boat per day each way. Mr. W. D. Phillipps, the general manager of the railway company, stated that in place of the abandoned canal it was proposed to construct a short spur line linking up the Trentham Park branch to the Trent and Mersey Canal, near Trentham Junction, and there erect canal wharves, tips, &c. The Commissioners granted the application.

Good progress is being made with the erection near Stoke Railway Station of the Central School of Science and Technology (Pottery and Mining), which is expected to be opened in the autumn; and in view of that event, the Stoke-on-Trent Education Committee have now requested the bodies which will be entitled to representation on the governing authority to send in their nominations. That authority will comprise, under the agreement arrived at with the County Education Committee, eighteen governors, to be appointed for three years. Eight are to be nominated by the Stoke-on-Trent Education Committee, four by the Staffordshire Education Committee, three to represent the potting industry, and three to represent the mining industry. The three governors representing the pottery trade are to be nominated as follows: two by the Joint Committee of Pottery Manufacturers' Associations, one for the earthenware and one for the china section; and one by the Pottery Workers' Union. The three governors representing the mining industry are to be nominated by the North Staffordshire Coalowners' Association, the North Staffordshire Institute of Mining and Mechanical Engineers, and the North Staffordshire Miners' Federation. At the recent meeting of the Stoke-on-Trent Education Committee it was also decided to negotiate for a strip of land, containing 600 to 700 square yards, adjoining the site of the school. It was pointed out that the donors of the land on which the institution was being built, Messrs. Bolton, had given sufficient land for the purposes of the school, but if this strip were used for some other purpose, it would detract from the appearance of the building.

A few months ago I called attention to the fact that the Stoke-on-Trent Education Committee were endeavouring to enlist the sympathy and co-operation of manufacturers in the new scheme that has been adopted in the local art schools—a scheme providing courses of instruction, according to the trade or profession the student is following. The appointment of a Joint Advisory Committee on Art was proposed, and at the February meeting of the Education Committee it was decided on the suggestion of the Manufacturers' Joint Committee, to appoint the following gentlemen as members of this Joint Advisory Committee, which is to consider the future of art education in the county borough:—Manufacturers: Mr. Lawrence Wedgwood, of J. Wedgwood & Sons, Ltd., Etruria; Mr. Ernest J. Johnson, of Johnson Bros. (Hanley), Ltd.; and Mr. J. R. Mellor, of the New Chelsea Porcelain Co., Longton. Art directors: Mr. John W. Wadsworth, of Mintons, Ltd., Stoke; Mr. J. E. Goodwin, of J. Wedgwood & Sons, Ltd., Etruria; and Mr. Charles J. Noke, of Doulton & Co., Ltd., Burslem.

Those who stigmatise pottery workers as unhealthy individuals, or croak about their short working life, will not find a case in point in Mrs. Emma Wheeldon, who celebrated her seventy-seventh birthday on Feb. 21, whilst in active and regular occupation as a "liner and bander" at the earthenware manufactory of Ford & Sons, Ltd., Newcastle-street, Burslem. She pursues her occupation without the aid of spectacles, and is still a skilful worker, earning good wages. She has been employed by Messrs. Ford since they commenced business, and was formerly engaged by their predecessors, Whittingham, Ford & Riley, her service at the works extending over a period of more than thirty years.——The medical evidence at an inquest touching the death of John Eyre, aged 58, who had been employed as a glost placer at a Longton china works, was that the cause of decease was acute congestion of the lungs following on chronic bronchitis, and the jury returned a verdict accordingly. Dr. Lefevre, who had made a post-mortem examination, said the man also suffered from kidney disease in an advanced state, but the heart was quite normal. Had the heart been affected, the doctor said, he would have considered the condition of the kidneys accelerated death, but he was absolutely certain that the lung trouble dominated and caused death.——In the case of a Tunstall glost placer, named Harvey Skellam, aged 57, who died on Feb. 6, an inquest jury found that the deceased died "primarily from lead poisoning, and secondarily from consumption." A post-mortem examination, said Dr. A. A. Hill, factory certifying surgeon, revealed the facts that the lungs were full of tubercle, that the left kidney had a cyst externally, and that the right kidney was enlarged. The cause of death was chronic lead poisoning, and a secondary cause was consumption of the lungs. The deceased, the widow stated, had worked as a glost placer for forty-four years.

China Clay Wanted in Sweden.—An inquiry has been received at the Swedish Chamber of Commerce in London for the names and addresses of United Kingdom exporters of china clay. Communications regarding this inquiry should be addressed to the Swedish Chamber of Commerce in London, 5, Lloyd's-avenue, E.C., mentioning THE POTTERY GAZETTE.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

FOR the retail houses of our trades in Scotland the month of February has been a quiet time, as had been expected, and as, indeed, it is always, compared with the comparative activity of the closing weeks of the year and the first half of January. But the quietness has, if anything, been somewhat less accentuated than during the Februaries of late years; this is a welcome sign, though, as yet, of no very particular significance, being that merely of some little improvement. Trade and commerce, generally throughout the country, are healthy, not to say robust, when compared with past years; and this naturally tells on the counter business of the china, earthenware, and glass retail houses. The drawback of bodies of industrial earners being on strike has not been absent, and, indeed, it is a drawback which nowadays we seem always to have with us, in a greater or less degree. But during the year, so far as it has gone, the evil of the strike, although present, has not been manifesting itself in any very malignant form. For about a month past, and up to the time of writing, Glasgow and the vicinity have been the scene of a strike amongst the carters and vanmen, and considerable damage has been inflicted in the way of interruption to the transit of raw materials and finished merchandise alike, including, also, some ill-effects on our own particular industry; but the strike is not at all general, being confined to the carters and vanmen employed by the leading contractor firms of the city and its environs. The railway companies are touched on the matter, but not very seriously, some of the coasting steamship owners being more badly hit than they are. At the date of writing, the partial stoppage still continues, but there are signs that both parties to the war are getting tired, and that both are more in the vein of compromise than they were. Conferences are taking place, and peace is expected to be declared soon, to the benefit of our trades as well as others, although, indeed, our own trades have not been much damaged as yet, beyond the curtailing of purchases of pottery and glass on the part of the families of the strikers.

The wholesale merchants in china, earthenware, and glass, during the latter end of January, and the whole of February, have, with their traveller staffs, been working the country's outlying retail marts, and they are now able to give information as to the general feeling there with regard to orders for the spring trade supplies. At the outset, there was experienced considerable stiffness in inducing the booking of new orders. The present comparatively high level of market prices for all kinds of fragile ware has had a good deal to do with this reluctance; but it would appear that a little later the retailers throughout the country realised the futility of kicking against the pricks—of waiting for a fall in prices that was not to come—for since about the middle of February orders have been coming in much more freely, in spite of the high level of quotations. A general belief that before very long there may be further rises all along the line of china, earthenware, and glass, has very likely been working in their minds, and inducing them to lay in stocks before the get-dearer time matured. On the whole, up to the present date, the wholesale merchants are not dissatisfied with the new booking results, these, indeed, marking even some little improvement upon the condition of things, as shown in their books, ruling in February of last and immediately preceding years.

Stocktaking and annual balancing have been progressing steadily for a number of weeks in the past. Some firms are not yet up to the crucial point of balancing, and it will be well into March before the latest of them attain the desired eventuality. At the same time, a fair number have got the matter fully through, and of these the most part find the profit outcome not at all roseate, as had been too well foreseen from as far back as a comparatively early part of 1912, when in the grip of the coal stoppage; but still, as a rule, the balance comes out on the right side.

THE STOURBRIDGE, BIRMINGHAM, AND NORTH OF ENGLAND GLASS TRADES.

(FROM OUR OWN CORRESPONDENT.)

AS is usual at this season of the year, there is a slight falling off in the demand in the Stourbridge district not only for the best cut crystal, but also for ordinary tableware. Already, though, there are signs of a revival, and it is hoped that, the general trade of the country being good, and in some important districts booming, the return to normal conditions will be both early and permanent. That hope is hardly a belief among the more intelligent practical men in the district; foreign competition, they say, is more severe than ever, and is making inroads into departments of the glass trade that previously were left almost untouched. It is well known that endeavours are being made in Belgium and France to equal in clearness and brilliance of metal, in elegance of form, and in beauty of cutting, the best productions of the leading manufactories; but so far the efforts have not succeeded. We hear that the American houses of the best class have similar designs on hand, and that something is likely to be put on the market this summer.

Best pressed glass, in dishes, sugars, tumblers, and the like, is selling fairly well. Travellers, however, do not appear to be sanguine that the present demand will last long. Light flint tumblers are cut fine in price owing to the low figure at which foreign half-pints and five-to-quarts —these for use in private houses—are put on the market, especially in the large provincial cities. Wines, clarets, and champagnes—cut, plain, and engraved—are slow of sale; Belgian, German, and Swedish goods of similar character, but so far as ornamentation is concerned, of an inferior description, being offered to customers at very low figures.

If we turn to Birmingham, it is easily seen how our trade is affected. Only the other day another flint glassworks was offered at auction. As in the sister district, if that of Stourbridge may be so described, there has been a slight decrease in business since Christmas. Some firms, however, are busy with the execution of London and provincial orders, part of which consists of commissions for flower vases, &c., in various coloured metal, and of beautiful new designs. In this branch competition is most keen, and the regular china and glass dealers find a good deal of their trade captured by drapers and dealers in fancy goods. The largest of these dealers appear to manifest an increasing desire to capture what business is going in ceramics and crystal, in the latter all kinds, from the plainest upwards. Just now, in the shops of several dealers in Birmingham, there are for sale quantities of cut scent bottles, jam dishes, and flower stands, nearly all of which appear to have been roughed on the edges with a view to silver or electro-plate mounts. Plain and coloured flower stands with double handles, like loving cups, are also displayed in some windows, and bear tickets marked "One Penny Each." They are of foreign make, and believed to have come from the establishment of one of the many electro-plate manufacturers in the city. A cor-

respondent says, "Are they sprats to catch whales? Their dispersal at such a ridiculously low price must affect the ordinary trade adversely." He is quite right. One of the local firms is bringing out novelties in the form of glass fittings for bath-rooms, both clear and opal. They consist of shelves, soap and other trays, and are expected to become popular. If some inventive genius would produce really toughened glass, what a boom there would be, not only in bath-room accessories, but all kinds of domestic fittings. The makers of small bottles in Birmingham keep actively employed. They never appear to be short of good orders. Like other employers, they are somewhat concerned at the report of the Departmental Committee on the Night Work of Boys.

The glass trades of Lancashire, embracing as they do several departments, are generally in a healthy condition. In Warrington there is activity in the flint branch and in Manchester the same is the case. Bottle manufacturers in the latter city are working at some pressure, and, so far as is known, there is not a bottle maker or gatherer out of employment. Wages are good, and through the combine manufacturers are getting better prices for their bottles. In flower vases and stands, chiefly in tinted glass, there is a fair amount of business being done, but the end of the selling season is approaching, and makers are wisely keeping down stocks. The demand for machinery glass keeps up well. In fact, customers are more than pressing for quick delivery. The high prices of fuel and of raw material tend to cut down profits to a serious extent. The tubing trade, which had slackened somewhat, has revived, and there is less of that "cutting" either on the part of Scotch or other houses that so greatly injured business during almost the whole of 1912. In St. Helens briskness prevails, and so far as green and black bottles are concerned the call for them was never stronger than it is now. Orders from Liverpool bottlers and others are large, and contracts are reported to be more in favour of manufacturers than was the case several months ago. The agreement between the men and the masters under the combine seems to be working well, and there is less friction, most certainly, than formerly prevailed. Orders for mineral water bottles are large. There is extreme activity at the plate, sheet, and crown glassworks, and the great firms feel the inconvenience arising from the comparative scarcity of boy labour. We are informed that they pay the fares of suitable lads for apprenticeship from Prescot on the west, and Wigan in the east, good wages, of course, being paid. The demand for plate glass, it is stated, is stimulated by the militant suffragists who, with hammers and stones, have broken so many large and costly shop and other windows in London, particularly in fashionable business quarters. Provincial orders are fully up to the average, and there is much doing in exportation. Glass benders are busy, and there is healthy activity in all other branches. The time was when St. Helens was an important centre of the flint glass trade, but that has long ceased, owing largely to oversea competition.

In that busy hive of industries of various kinds composed of the central portions of West and South Yorkshire, which form the chief seat of the glass bottle trade, activity has prevailed since the commencement of the year; and it was certainly active ere the winter set in. The combine between masters and men, already referred to, is a great factor; prices are generally satisfactory; "cutting" is a negligible quantity, or nearly so, and the workmen are well paid. But there is a fly in the ointment, if an old proverb may be quoted, and that fly is boy labour at night. As is known to everybody with a practical acquaintance with the trade, the manufacture of glass of every description can only be carried on while the metal is molten—semi-liquid, in fact—and work must therefore go forward night and day until the receptacle, whether it be the "pot" of the flint glass manufactory, or the "tank" of the bottle works, has been emptied of its contents by the gatherers with their blowpipes. To carry the articles made from the chair of the chief man to the annealing oven, of whatever character, boys—and boys only—are employed.

Early in January the Departmental Committee appointed by the Home Secretary to inquire into the hours of labour and the ages of the boys, reported that, as regards the glass trade, the age should be raised to 15 years, and in 1916 to 16. In 1895 an arrangement was entered into fixing the age of admission to work at 14, and it has worked fairly well; but the change proposed, it is feared by manufacturers, would have the effect of seriously crippling the trade. Boys at a flint glass works are able, most of them, to take up the trade and become footmakers and servitors, a percentage rising to the position of chairman. In bottle works, where very much less skill is required than in the sister industry, there is some fear of a "blind-alley" lookout for many of the lads, and not a few become mere labourers of the unskilled class. Competition is so severe, despite the combine, that employers cannot afford to pay the wages a youth of 16, 17, or 18 years would require in the bottle trade. Fourteen years as a minimum limit works fairly well, as stated, and the general feeling is that it should be adhered to. With respect to business, we have to record that a fair amount of briskness prevails almost everywhere. It is most pronounced at Knottingley, Thornhill, and Rotherham, at which latter town much of the output consists of flint glass bottles for medical purposes. A new working agreement affecting this branch, but applicable to all parts of the country, was entered into some weeks ago between the masters and men, certain advances being granted to the latter, who in all number between 800 and 900. A concession as regards better payment for overtime has pleased all grades of the workers, and the employers, or some of them, gain by four apprentices being allowed for every seven chairs, a chair representing a set of men. In Hunslet, Wakefield, and Castleford there is more doing in the production of large work. In Barnsley trade has improved. Taking the whole district the number of employees is nearly 5,000, considerably more than half of the "glass hands" in the United Kingdom, and good wages are earned.

In York city there has been a little falling off in both the flint and bottle houses, but just now there is an improvement, and a fairly busy spring is anticipated. Best flint in table ware is certainly showing more activity. The demand for tubing for scientific purposes, as well as for ordinary uses, though not strong, is satisfactory on the whole. Glass cutters are busier.

Further north, in Newcastle-on-Tyne, and in Sunderland, the glass trade has recovered from a slight depression that set in just after Christmas, and at the time of writing at both centres rather more men are employed in the manufacture of bottles, &c. Pressed goods, in tumblers, salts, and dishes, are selling more freely, but prices are not very remunerative, the foreigner stepping in through our free ports and putting his goods on the market at exceedingly low figures. The inferior colour and make of the articles are not taken into account as they ought to be by purchasers, nor the fact that in the main they are produced under sweated conditions. At Seaham Harbour bottle works there is more activity, and a good prospect for the spring, which it is hoped will be a genial one for the sake of the trade; a hope shared by masters and men all over the kingdom. Glass cutters in Newcastle are not as busy as they were in the autumn; still, employment may be reported as good on the whole, and is expected to improve considerably before the end of the month.

THE CORNISH CHINA CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

THE past month has been extremely favourable to all engaged in the Cornish china clay trade. Whilst blizzards have been the experience in the North and other parts of England, Cornwall has been basking in sunshine. The weather conditions during the past year have been abnormally bad, as we all know, but only those who closely follow the County Council reports would be aware that during the first eleven months of 1912 the rainfall in the St. Austell district measured 53·77 inches as against 31·60 for the corresponding period in 1911, the consequence being that many works were flooded, and in all the production has been seriously retarded.

The working of the Health Insurance Act amongst the china clay workers, approximately 5,000, has been absolutely smooth throughout the district, both employers and men recognising its advantages. In consequence of the increase in cost of living a general rise in wages has been conceded, and the conditions of labour certainly compare favourably with those of any other industry. The men who have joined the local branch of the Workers' Union are taking advantage of the boom in the trade, and, through the local secretary, have presented to Mr. P. M. Coode, the secretary to the China Clay Association, a petition for a 25s. minimum wage. It was stated at the meeting, which was presided over by Mr. T. Medland Stocker, J.P., that the subject of wages did not come within the scope of the objects for which the Association was formed. Mr. Stocker pointed out that the objects of the Association were principally for the discussion and adjustment of such questions as railway facilities, postal accommodation, exporting advantages, and National Health Insurance negotiations with the Government, and matters of that nature. Consequently the secretary was asked to explain to the local representative of the Workers' Union that the question was outside the limitation of the Association. Mr. Stocker contradicted a statement which had been made at one of the clay workers' meetings that the merchants would combine against the men's efforts. At a subsequent meeting of the men's representatives which was held to consider the reply of the China Clay Association, it was decided to address a communication to each firm requesting a collective meeting to meet a deputation of the men.

The mining operations in the St. Austell district are curing all unemployment. Agricultural labourers are leaving the land for the mines and china clay works. This, with the opening of numerous works, gives labour a distinct advantage. It must, however, be observed that the Cornish china clay workers have never lost any time in wet weather, which in the past year has been quite abnormal, adding considerably to the expenditure of production.

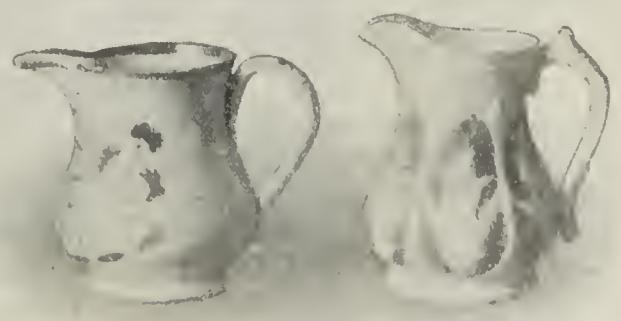
The extensions at Fowey are proceeding apace, and about 200 men are engaged in the alterations which are being carried out by the Great Western Railway to meet the demands of the china clay traffic.

During the month a very interesting presentation was made by Mr. William Rose, an ex-Mayor (of North & Rose, the well-known Cornish china clay and stone merchants of St. Austell) to the Truro City Council of a handsome pendant and links for attachment to the mayoral chain. The Mayor accepted the chain on behalf of the city.

At the last meeting of the Cornwall Education Committe, H.M. Inspector of Technical Schools reported as follows :—" At present the special work provided in the china clay district deals exclusively with the engineering side of the industry. It is worthy of consideration whether, in course of time, some further work might not be introduced bearing on some other aspects of the industry." The chief desideratum at present is the provision of a small technical building to accommodate the work at St. Anstell, containing a chemical laboratory and a mechanical laboratory, and, at least, two class-rooms ; one fitted up for drawing. A desirable addition would be a small laboratory for special work in the shape of research in connection with the principal local industry. It was pointed out that, in pursuance of a resolution passed at a previous meeting, plans had been drafted for the elementary side of such premises, and it was hoped it might be possible to deal with the Inspector's suggestions at no distant date.

The unprecedented demand for china clay has been responsible for much activity prevailing in the Penwithick or north-east district of St. Austell. As we have already intimated, the Great Hallaze China Clay Co. have acquired an excellent site, where operations are in full swing. A main shaft has been sunk 23 fathoms, and a 60-fathom level is in course of construction. The company have installed a serviceable Cornish beam-pumping engine, with two 12 in. lifts, and have decided to build the tanks and drying kilns at Par. The situation of the works will afford every facility for transit in its liquid form through pipes a distance of several miles to its destination within proximity to a harbour. The system of gravitation through earthenware pipes is being largely adopted by china clay firms. John Lovering & Co.'s drying kilns at Charlestown are supplied in this way from their extensive works in the Higher Quarter and Carclaze, and a tram line connects the " dries " to the docks, so that cartage costs are not only dispensed with, but transit charges reduced to the lowest tonnage of any. Parkyn & Peters' works at Pentruff are also nearing completion, and this company are contemplating the construction of an earthenware conduit to Par, where new tanks and kilns will be erected with an increased capacity of output. The newly formed Hensbarrow China Clay Co. have also decided to run their liquid clay to Par, where the tanks and " dries " will be erected. The West of England and Great Beam China Clay Co. were probably the pioneers of the gravitation system, which has greatly facilitated the industry in many parts through the erection of the settling tanks and " dries " adjacent to the railway. The North Cornwall China Clay Co. are also prosecuting the development of their works at Stannon Moor, near St. Breward, with celerity, and their five large " dries," which are situated 5¼ miles from the pits, are connected also by a double run of earthenware pipes, and are taxed to their utmost capacity.

Death of Mr. E. Morgan Jones.—We regret to learn that Mr. E. Morgan Jones, of 102, Hatton Garden, E.C., London manager for Thomas Forester & Sons, Ltd., of Longton, died on Feb. 24. An obituary notice will appear in our next issue.



The Gazette.

Dissolutions of Partnership.

NOTE.—*When two dates are given in the following announcements the first is the date of the dissolution. The date in parenthcscs that of the official advertisement.*

LONGMORE S. & O. (Saml. Jas. Longmore and Oliver Wm. Longmore), 68, Pershore-st., Birmingham, looking glass manufacturers and plate glass merchants. Feb. 7. Debts by S. J. Longmore, who eontinues as S. Longmore. (Feb. 11.)

STIFF JAS. & SONS (Sydney Jas. Stiff, Jas. Arthur Stiff, and Wm. Fredk. Stiff), London Pottery, Lambeth, stoneware and terra cotta manufaeturers. Dec. 31. (Feb. 21.)

WOODHAM E. & Co. (Edwin Woodham and Alf. Mignôt), 169 and 171, Hanbury-st., Mile End New Town, glass bottle manufacturers. Dec. 31. Debts by A. Mignôt, who continues. (Jan. 28.)

Notices of Intended Dividends.

CHILD JNO., 7, Woodsley-rd., Idle, and 33, Pine-st., Bradford, wholesale china and earthenware dealer. Claims March 5 to W. Durrance, Bradford, O.R.

PHILIPSON WM. T., 37, Market-st., Cleethorpes, ironmonger, glass, ehina, &c., dealer. Claims to J. F. Wintringham, St. Mary's-chambers, Great Grimsby, O.R.

Notice of Dividend.

RHODES HARRY E., Blenheim-house, Worcester-rd., Malvern Link, ehina dealer. First and final, 1s. 8d., at O.R.'s, Woreester.

Extracts from the Registry of Deeds of Arrangement.

The following Dceds of Arrangement with Crcditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executcd in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

** These figures are taken from the Affidavit filed with the Registered Deed. but may be subject to variation on realisation. In some cases the estimatcd assets are not stated.*

(The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the crcditors.—EDS. P.G.)

NORMAN FRDK. CHAS., 20, High-st., Camberley, china and glass dealer. Assignment upon trust, &e. (except household furniture, &c.). Dated, Jan. 28. Filed, Feb. 1. Liabilities unsecured, £295. Property, after deducting secured elaims, £173. Tr., F. Freneh, 10 and 12, Eastcheap, E.C. The following are creditors :—S. P. Catterson, London, £10 ; Jones & Co., London, £16 ; F. Smith, London, £14 ; Lockett & Sons, London, £13 ; Falk, Stadelmann & Co., London, £11 ; "Camberley News," Aldershot, £11 ; J. Salter (rent), Aldershot, £17 ; —Poulton, Reading, £10 ; J. Fuller & Co., Reading, £13 ; Rose & Co., St. Albans, £14.

WINTER DONALD GUNN, trading as Winter's Stores, 86 and 88, Hamlet Court-rd. and residing at Southgate, 41, Ceylon-rd., both Westcliff-on-Sea, china and glass merchant, &c. Dated, Feb. 6. Filed, Feb. 13. Liabilities unsceured, £3,152. Property, after deducting secured elaims, £1.629. Tr., W. W. Knapman, 24-27, Rood-lane, E.C. The following are among the ereditors :—Anglo-Belge Glass Co., Londou, £16 ; C. J. Dams & Co., London, £22 ; Doulton & Co., Ltd., London, £31 ; Falk, Stadelmann & Co., Ld., London, £31 ; J. Lockett & Sons, London, £58 ; Shorter Bros., London, £67 ; Burgess & Leigh, Burslem, £22 ; W. H. Lockett, Hanley, £16 ; Swinnertons, Ltd., Hanley, £37.

Private Meeting.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

WINTER DONALD GUNN, trading as Winter's Stores, 86 and 88, Hamlet Court-rd., Westcliff-on-Sea, ehina and glass dealer, &e. The ereditors interested herein were called together reeently, when a statement of affairs was presented showing a deficieney of £1,522 13s. 9d. The assets eonsisted of stock-in-trade, estimated to produce £1,545 1s. ; loose fittings and utensils, valued at £70 ; book debts, £494 18s. 1d., expected to produce £337 17s. 1d. ; cash at bank and in hand, £10 4s. 4d. ; and rents receivable, £15 6s. 8d. The debtor took over the business from his father in January, 1911. He was joined in partnership by another, who paid £900 for a half-share in the eoncern. The assets taken over by the partnership exceeded the liabilities by £1,800, but that sum included an amount of £700 for the goodwill. In April, 1912, the partnership was dissolved, the debtor paying his partner £850 in eash, and giving him six promissory notes of £25 eaeh. Four of the promissory notes had been met, and the balanee of £50 was still owing. In order to pay out the partner a loan was obtained from the bank of £1,000, which was guaranteed by the debtor's father. As security for his guarantee the debtor's father was given a eharge on the lease of the premises. The receipts from the business had been from £7,000 to £8,000 per annum. The drawings had been at the rate of £4 10s. a week. It was stated that attempts were being made to dispose of the business as a going eoncern, and that there was every prospeet of a good dividend being paid to the ereditors. In order to carry that through, however, it would be necessary to get the lease of the premises. After discussing the position it was resolved that, subject to the bank's elaim being redueed to £450 and the lease of the premises being given up, that the estate should be dealt with under a deed of assignment. A committee of five of the prineipal creditors was also appointed. [For abstract of list of creditors see preceding column.]

New British Patents.

The following list has been compiled expressly for "THE POTTERY GAZETTE" by G. F. REDFERN & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

APPLIANCE FOR CUTTING GLASS, No. 2,899.—E. Cervenka. Appliance for cutting glass articles of tubular, cylindrical or similar form. Feb. 4, 1913.

CASTING CRANKS OR SUPPORTS FOR POTTERY, No. 2,432.—C. F. Bailey. Process of and means for casting cranks or supports for pottery and the like. Jan. 30, 1913.

CLAY BOX, No. 2,074.—R. Evans. Clay box. January 24, 1913.

CLAY SOLIDS FOR THE MANUFACTURE OF INSULATORS, No. 1,658.—W. Podmore. Process of and means for forming elay solids employed in the manufacture of insulators and other articles. Jan. 21, 1913.

GLASS AND OTHER TILING, No. 1,079.—Shark Grip Tiling Co. (1910), Ltd., and T. White. Glass and other tiling. Jan. 14, 1913.

GLASS BOTTLES, JARS, &C., No. 2,972.—H. S. Watson and A. J. Wightman. Glass bottles, jars, and the like. Feb. 5, 1913

POULENC'S LIQUID GOLD

2 GRANDS PRIX—PARIS, 1900. | 2 GRANDS PRIX—ST. LOUIS, 1904.
FRANCO-BRITISH EXHIBITION, LONDON, 1908.—MEMBERS OF JURY (HORS CONCOURS)

BROWN GOLD. LUSTRE COLOURS.

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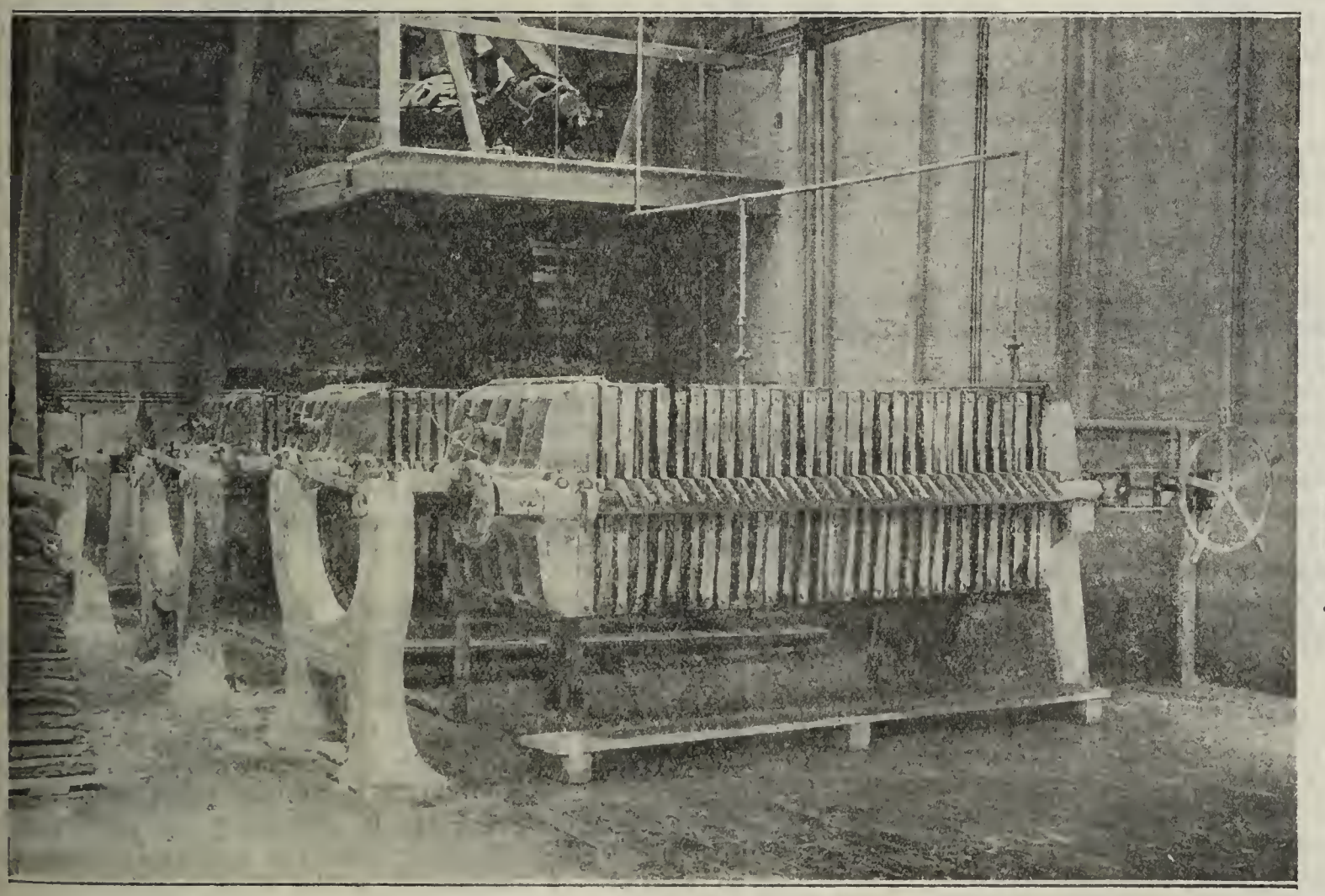
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GLAZING PLASTIC MATERIALS, &c., No. 2,197.—P. Fenaroli & Soc. Anon "Saces." Process for glazing natural and artificial stone and plastic materials. Jan. 27, 1913.

INLAID AND ORNAMENTAL FACING OR TILES, No. 1,261.—H. Wildblood. Inlaid and ornamental facing or tiles. Jan. 16, 1913.

JARS AND CLOSURES THEREFOR, No. 1,604.—G. Glocker. Jars and closures therefor. Jan. 20, 1913.

JOINTING EARTHENWARE PIPES, No. 1,980.—G. Naylor. Jointing earthenware pipes. Jan. 24, 1913.

MANUFACTURE OF ARTICLES FROM PLASTIC SUBSTANCES, No. 1,081.—O. Eberhard. Process for the manufacture of articles from plastic substances. (Con. date, Feb. 6, 1912, Germany.) Jan. 14, 1913.

MANUFACTURING TRANSPARENT QUARTZ GLASS ARTICLES, No. 2,150.—F. Wolf-Burckhardt. Method of manufacturing transparent quartz glass articles. (Con. date, Jan. 26, 1912, Germany.) Jan. 27, 1913.

Specifications Published.

300.—Trivett. Flower pots and the like.
3,141.—Cockell. Plate or receptacle for holding oysters or other shell fish.
9,277.—Evers. Kilns, muffles, and the like.
12,266.—Dashwood & Price. Floor block or tile.
2,282.—De Reytere. Apparatus for the treatment of glass.
26,031.—Bateson & Bateson. Glassmaking furnaces.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, *which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."*

609,678.—E. Offenbacher, Marktredwitz, Bavaria, Germany. Address for service, c.o. Bauer, Imrie & Slack, 72-74, Cannon-st., E.C.
609,851.—R. W. Bill, 7, Headingley-rd., Handsworth, Birmingham.
611,827.—Pilkington's Tile and Pottery Co., Ltd., Clifton, near Manchester.
611,830.—C. Collard & Co., Ltd., Poole, Dorset.
611,944-50.—H. H. Walford, 121, Rotten Park-rd., Edgbaston, Birmingham.
612,351.—De Grelle, Houdret & Co., London Wall, E.C.
612,353-4.—Pilkington's Tile and Pottery Co., Ltd., Clifton, near Manchester.
612,547-9.—Gibson & Sons, Ltd., Burslem.
606,515.—R. W. Bill, 388, Park-rd., Hockley, Birmingham.
611,250.—J. A. Robinson & Sons. Ltd., Stoke-on-Trent.
611,360-1.—Booths, Ltd., Tunstall.
611,833-4.—The Jandus Arc Lamp and Electric Co., Ltd., 39, Hartham-rd., Holloway, N.
612,042-43.—Bullers, Ltd., 6, Laurence Pountney Hill, Cannon-st., E.C.
612,164.—The International Bottle Co., 108, Fenchurch-st., E.C.
612,176-81.—McDowall, Steven & Co., Ltd., 4, Upper Thames-st., E.C.
612,270 and 612,352.—Stevens & Williams, Ltd., Brierley Hill.
612,307-12.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.
612,329.—The International Bottle Co., 108, Fenchurch-st., E.C.
612,540-45.—R. H. & S. L. Plant, Longton.
612,665-70.—The Worcester Royal Porcelain Co., Ltd., Worcester.
612,741.—Grimwades, Ltd., Stoke-on-Trent.
612,821.—C. H. Sankey, Essex, Wharf, Canning Town, E.
611,163.—Thomas Forester & Sons, Ltd., Longton.
612,104.—C. H. Provis, Highfield, Mutley-rd., Mannamead, Plymouth.
612,418.—W. Adams & Co., Greengates, Tunstall.
612,008-16.—The Worcester Royal Porcelain Co., Ltd., Worcester.
612,988.—C. E. Challis, 2, Mount Pleasant, W.C.
613,038.—Grimwades, Ltd., Stoke-on-Trent.
613,091-5.—Allertons, Ltd., Park Works, Longton.
612,085.—Siemens Bros., Dynamo Works, Ltd., Caxton House, Tothill-st., S.W.
612,862-3.—S. Fielding & Co., Ltd., Stoke-on-Trent.
612,911.—C. T. Maling & Sons, Ford Potteries, Newcastle-on-Tyne.
612,930.—Adderleys, Ltd., Daisy Bank Pottery, Longton.
613,209-18.—Max Emanuel & Co., 41-2, Shoe-lane, E.C.
613,290.—Rubian Art Pottery, Ltd., Park-rd., Fenton.
613,422.—H. P. Bull, The Green, St. Helens, Isle of Wight.

LATEST COMPLETE SPECIFICATIONS.

Preventing Deposit of Moisture on Windows.—C. Holz, of 48, Doneraile-st., Fulham, declares this invention to be as follows :—This invention relates to an improved apparatus for preventing the deposit of moisture on the windows of shops or restaurants or on mirrors or other glass surfaces, in which apparatus a current of air is employed, distributed in such a manner as to maintain the glass surface clear. The apparatus can also be adapted for the purpose of preventing flies reaching and settling upon food displayed in shop windows or in other exposed positions. According to my invention the air current (obtained by means of a blower or fan driven by a suitable electric or other motor or by means of any other convenient mechanism) is led through a pipe or pipes to an outlet or outlets situated preferably at one edge of the glass and close to its surface and consisting of a flattened bulb or head having a narrow slit parallel with the glass, extending for about a semi circle around its periphery. The air is thus blown radially in a thin flat stream from the bulb, spreading over the surface of the glass. For large windows two or more such bulbs may be employed, placed along one or more edges The bulb may be made in any convenient form which produces the desired effect, and may, if found desirable have lips on one or both sides of the slit to direct the air discharge. In some cases the bulbs may be placed well within the edges or at the middle of the glass, and the slits extended to spread the thin stream of air in all directions.

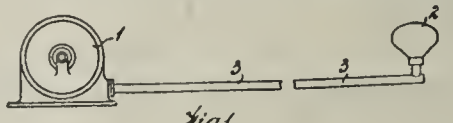


Fig.1.

Fig.2.

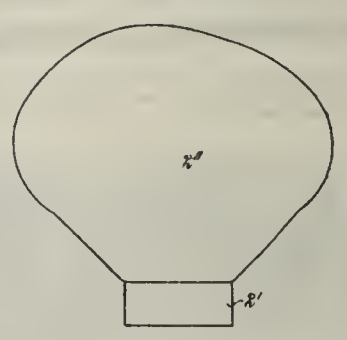
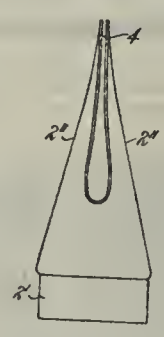


Fig.3.



Articles of Silica Glass and Leading-in Wires.—H. A Kent, of The Poplars, Maidstone-rd., Bound's Green Middlesex, and H. G. Lacell, of Ardoch, Nether-st., Finchley N., and the Silica Syndicate, Ltd., of 82, Hatton Garden E.C., declare this invention to be as follows :—The object of this invention is to overcome difficulties which have been experienced in combining leading-in wires with articles made of silica glass. It is necessary, in sealing wires into silica glass, not only that the leading-in wires shall be capable of withstanding the high temperature employed in manufacturing articles of silica glass, but also that the leading-in wires shall be of very small cross section in order to obviate, or minimise, the leakage of air, at the joint, or junction, of the leading-in wires with the

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silica glass, which might be caused by contraction of the metal on cooling. After numerous trials and experiments the present inventors have found that molybdenum is a metal which fulfils the requisite conditions, as a very small sectional area of that metal will carry a large current whilst the said metal will withstand the high temperature employed. In manufacturing articles of silica glass, it is necessary that the molybdenum whilst being applied should, as far as possible, be protected from oxidation, and for that purpose the molybdenum wire of small cross section should be inserted in a small orifice in the silica glass, so that but a very small amount of air can come in contact with the metal whilst the heated silica glass is closed around it, or the operation of embedding the molybdenum wire in the silica glass is carried on in a vacuum, or in a non-oxidising atmosphere. The joint between the molybdenum and the silica glass can be made so that it will constitute a complete seal against the passage of mercury, or other liquid, although it is not essential that it should be absolutely proof against passage of air.

Sanitary Spittoons.—J. Chatwin, of Chatwin, Herschel & Co., 22, Gray's Inn-rd., W.C., on behalf of the Steingutfabrik G.m.b.H., Teplitz, Austria, claims :—(1) In a sanitary spittoon with water supply, the combination of a lower container having an outlet at its lower end, an upper cup arranged in the latter for the reception of sputum, an upwardly inclined flange on the latter having a plurality of elongated escape-holes therein, and an inwardly projecting rim on said lower container to entirely cover said flange and escape-holes. (2) In a sanitary spittoon with water supply, the combination of a lower container having an outlet at its lower end, an upper cup arranged in said container, an upwardly inclined flange on said cup having a plurality of elongated escape-holes, a rim on said lower container to entirely cover said flange and escape-holes, a tangentially arranged water inlet branch on said rim, a small bridge between the connection of both, and means to direct the flow of water to the centre of cup. (3) In a sanitary spittoon with water supply, the combination of a lower container having an outlet at its lower end, an upper cup arranged in said container, an upwardly inclined flange on said cup having a plurality of elongated escape-holes, a rim on said lower container to entirely cover said flange and escape holes, a tangentially arranged water inlet branch on said rim, a small bridge between the connection of both, means to direct the flow of water to the centre of cup, and an incline on said flange to face the orifice of said water inlet branch.

Fig. 1

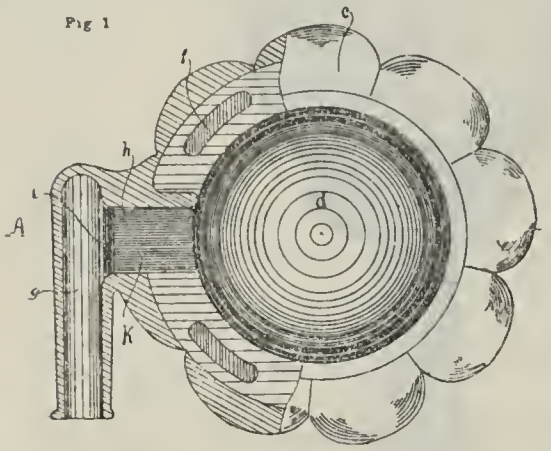
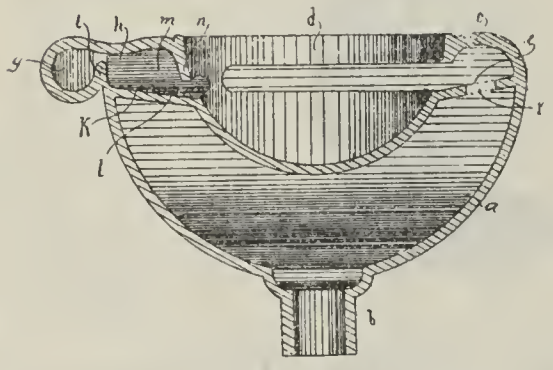
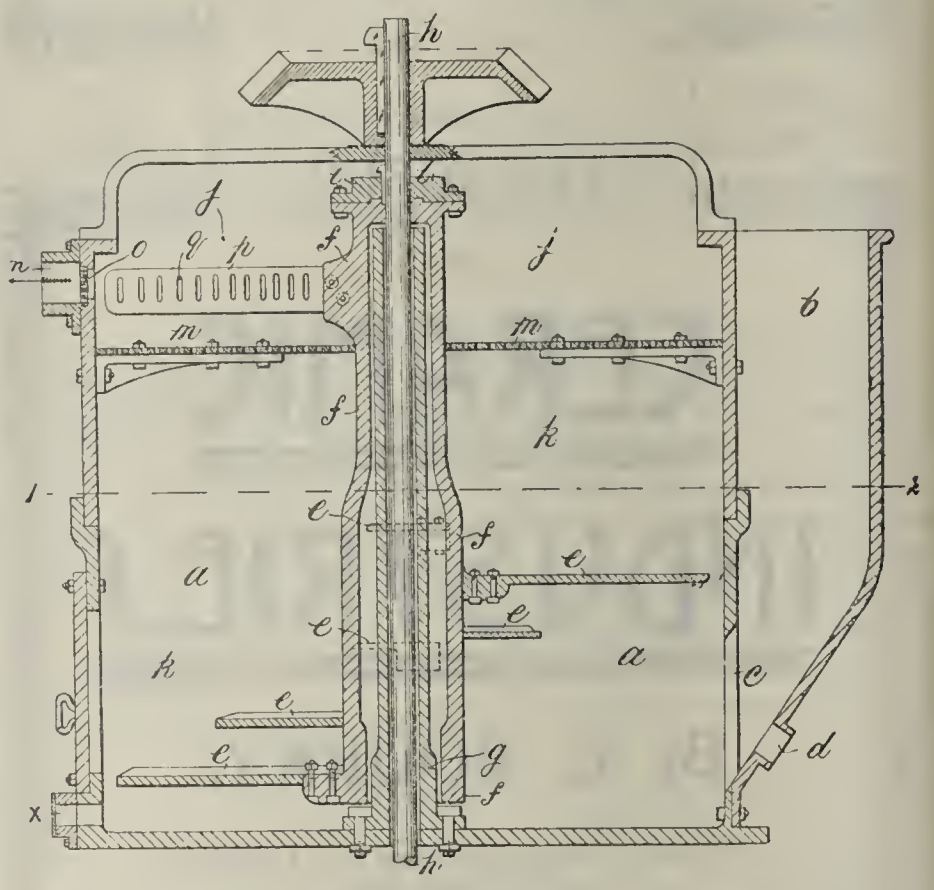


Fig. 2



Blungers for Potters' Slip.—W. Podmore, of West View House, Porthill, Stoke-on-Trent, E. Johnson, of 48, Hall-st., Burslem, and W. Boulton, Ltd., of Navigation-rd., Burslem, claim :—(1) Apparatus for manufacturing potters' slip and like material consisting of a vessel divided into two chambers by a perforated plate, a hopper to receive the clay, a water feed at the base of the hopper or chamber, a set of rotating blades or agitating device within the lower chamber, one or more rotatable arms in the second chamber, and a filtering or sieving device at the delivery point, the whole arranged and operating.



(2) In apparatus for the purposes stated as claimed in claim (1) the provision of separate arms or blades on the central carrier arranged substantially tangential to the periphery of the rotatable sleeve so that their forward edges will come in contact with the clay from the inner to the outer ends of such edges and so gradually and easily force their way through such clay and force it towards the sides of the vessel, in the process of mixing the materials, with less expenditure of power than with ordinary radially arranged arms. (3) In apparatus for the purposes stated as claimed in claim (1) a single tube for supporting the agitating arms or blades fixed to a central shaft and supported at its lower end by a footstep bearing, stud or the like with or without a partition to stop entrance of slip to the tube. (4) In apparatus for the purposes stated as claimed in claim (1) the use of a ball bearing or bearings for supporting the central shaft or sleeve.

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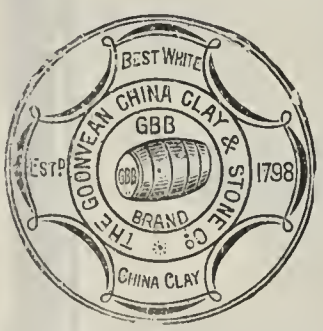
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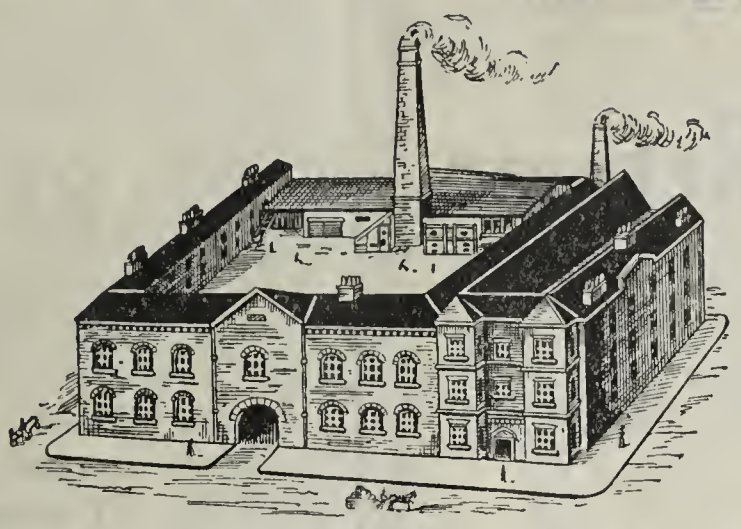
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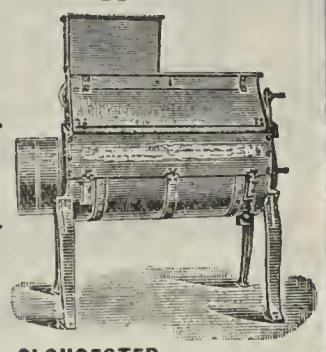
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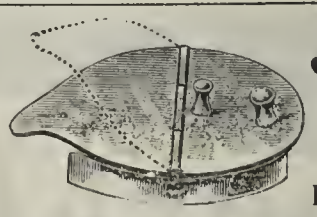
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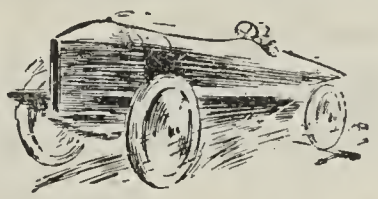
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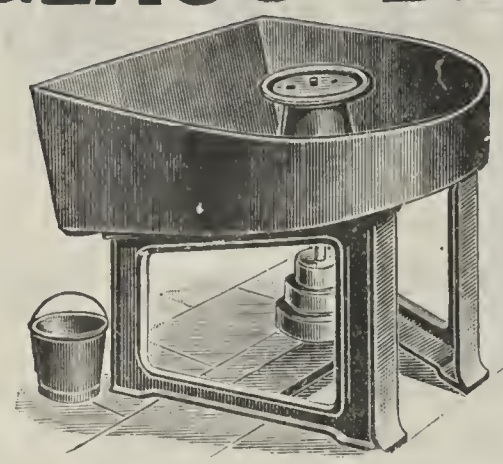
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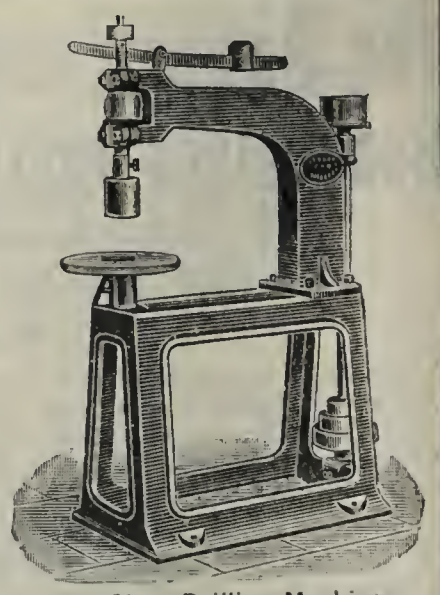
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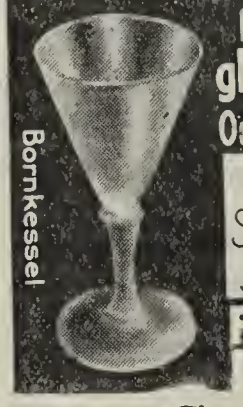
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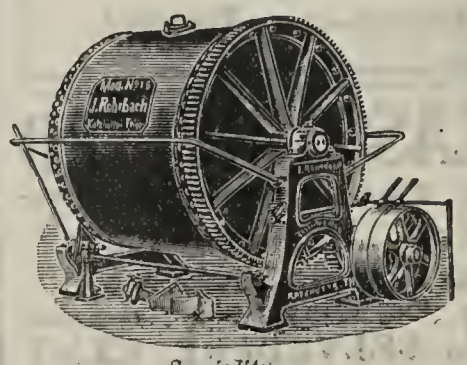
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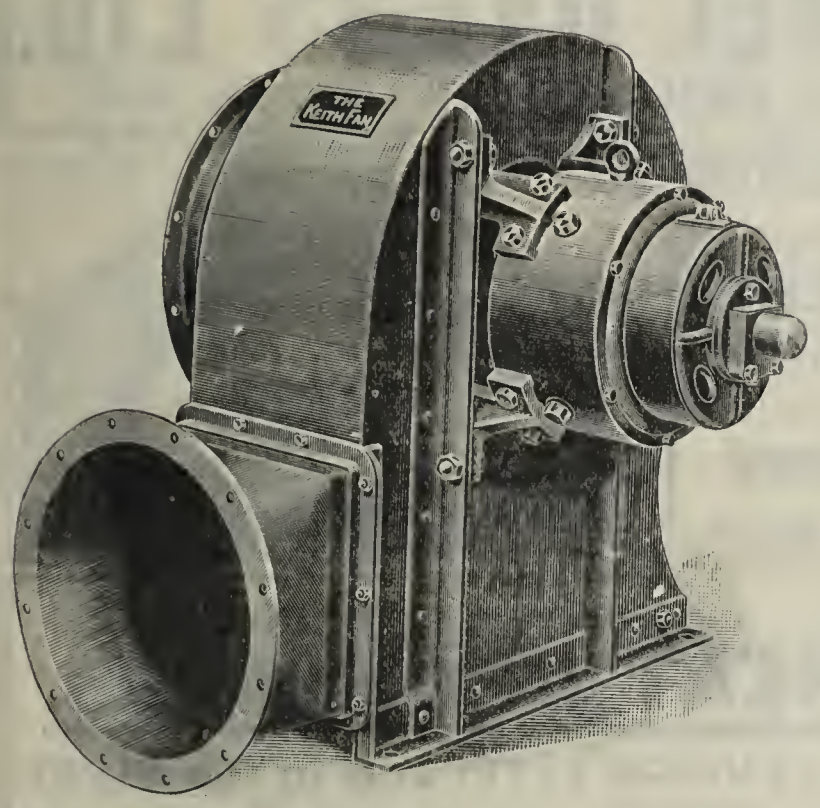
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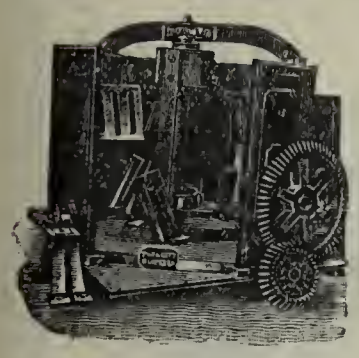
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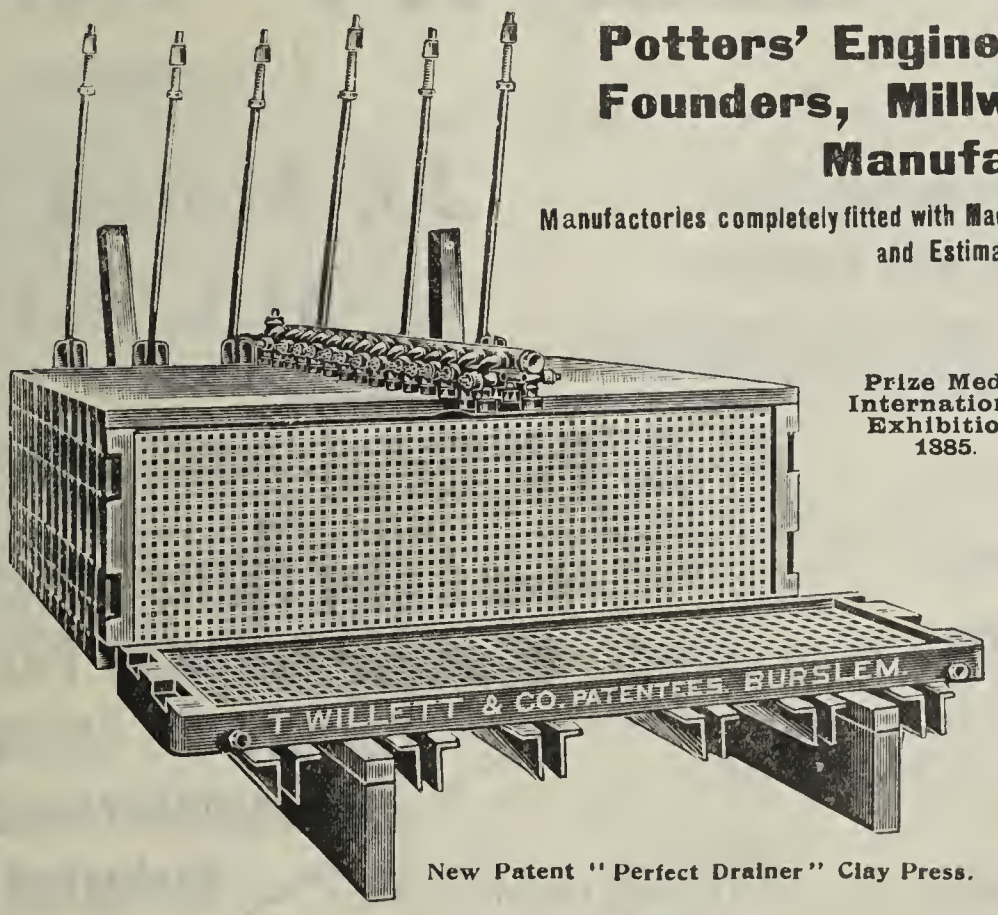
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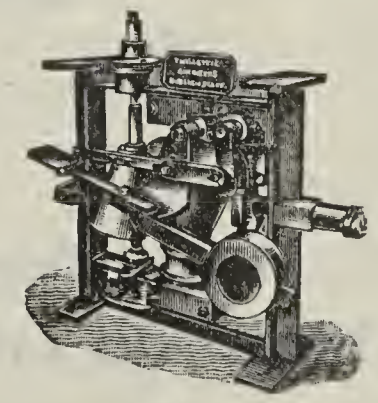


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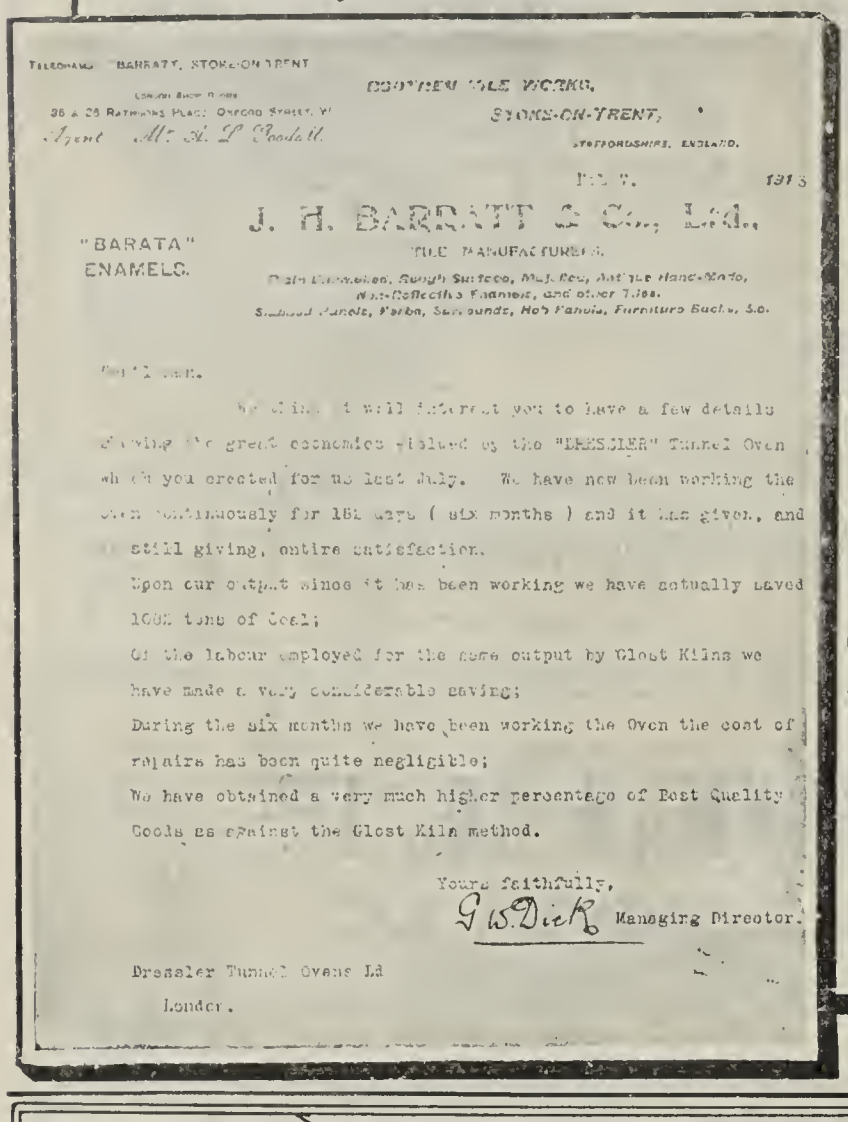
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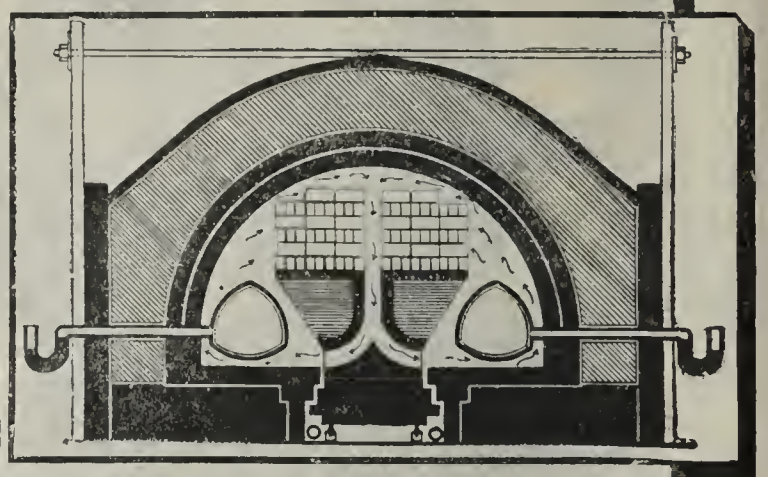
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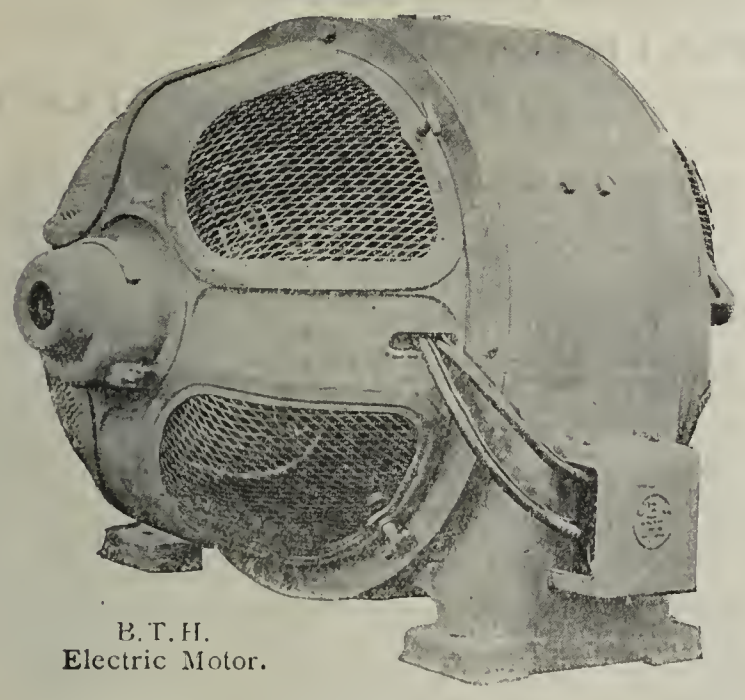
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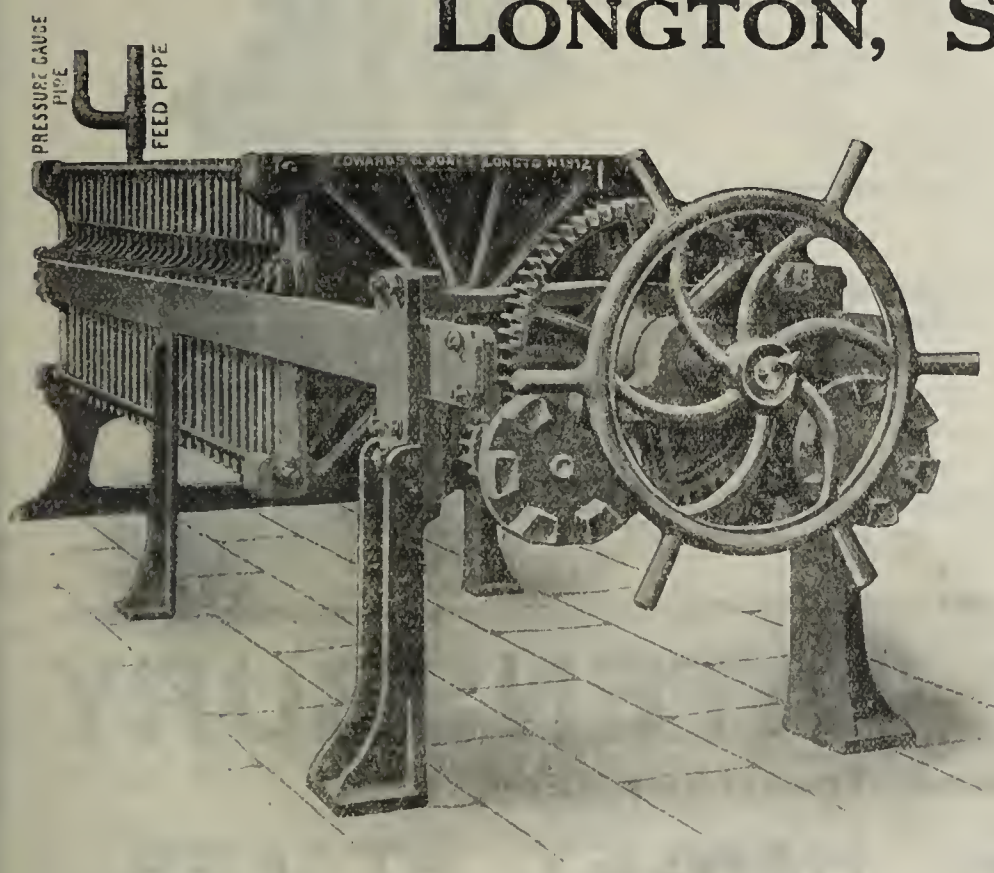
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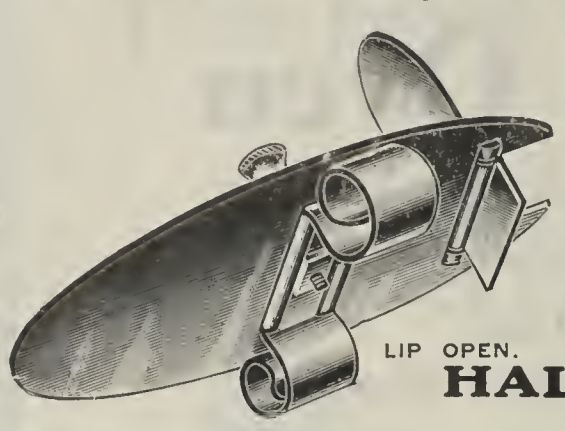
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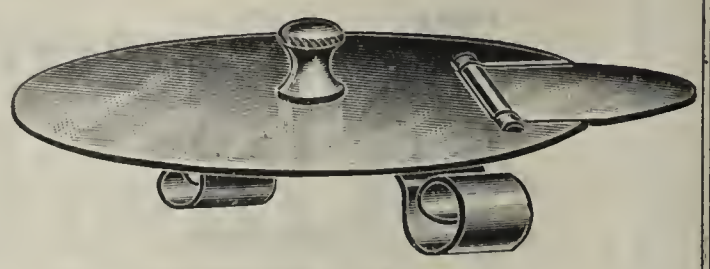
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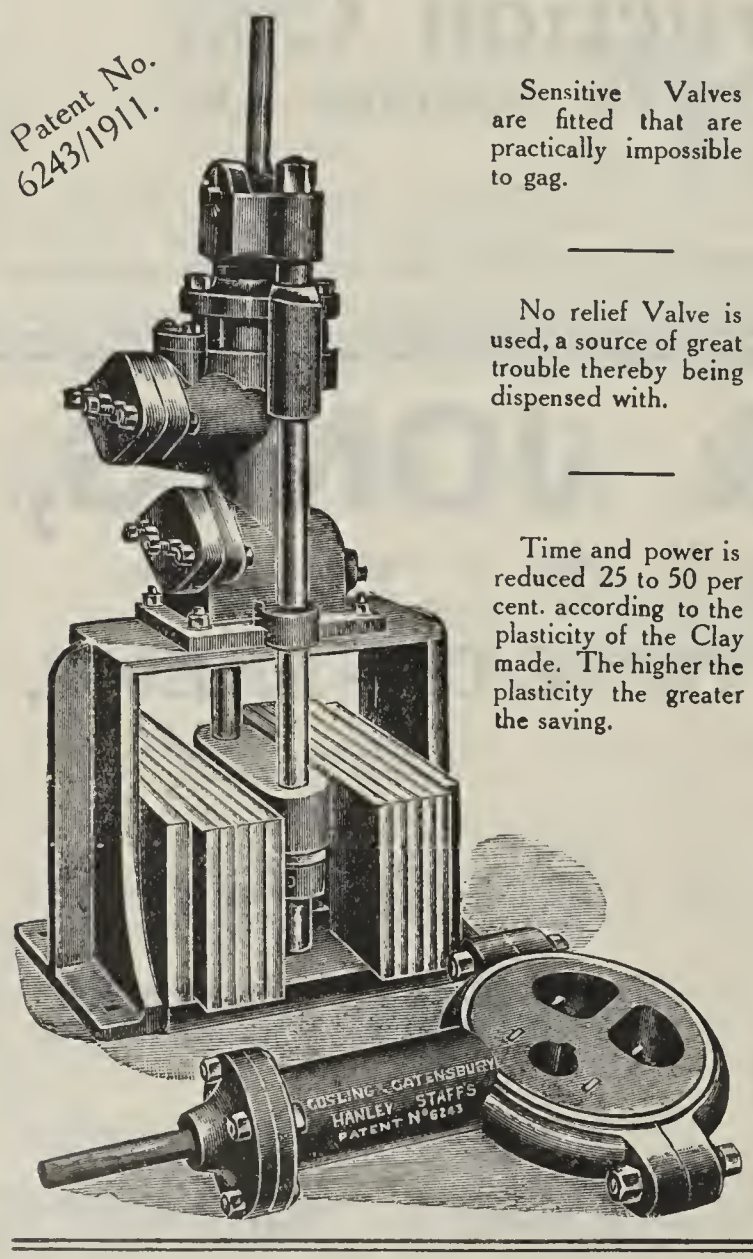
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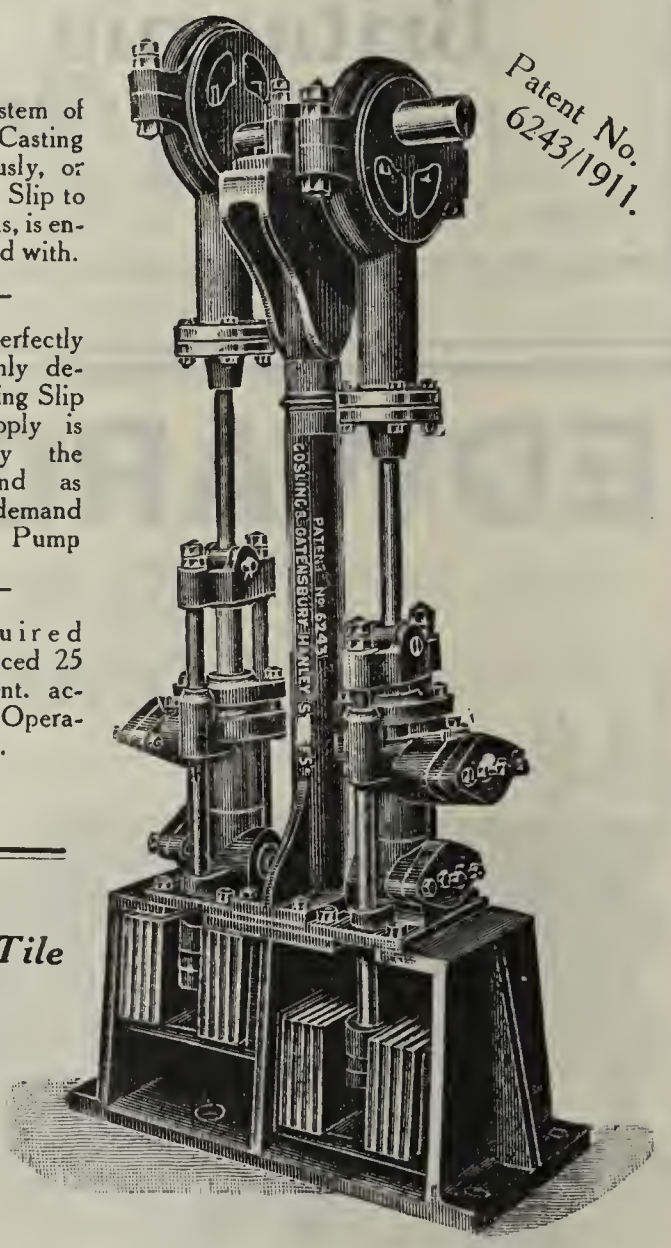
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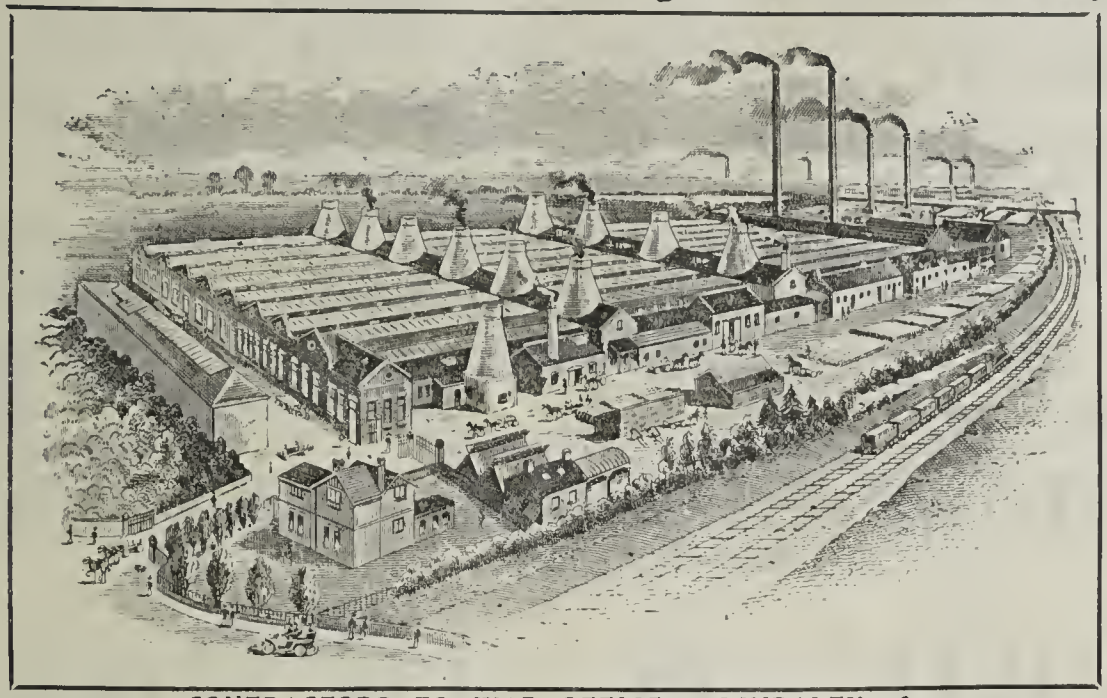
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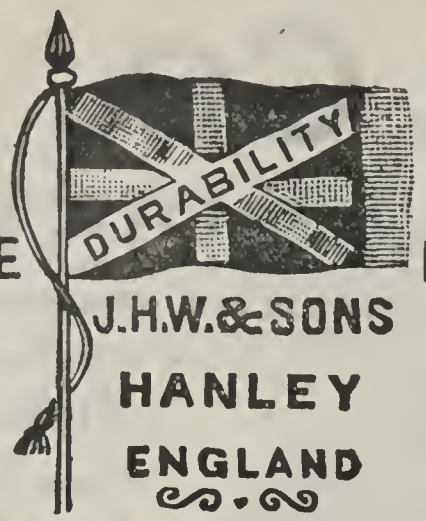
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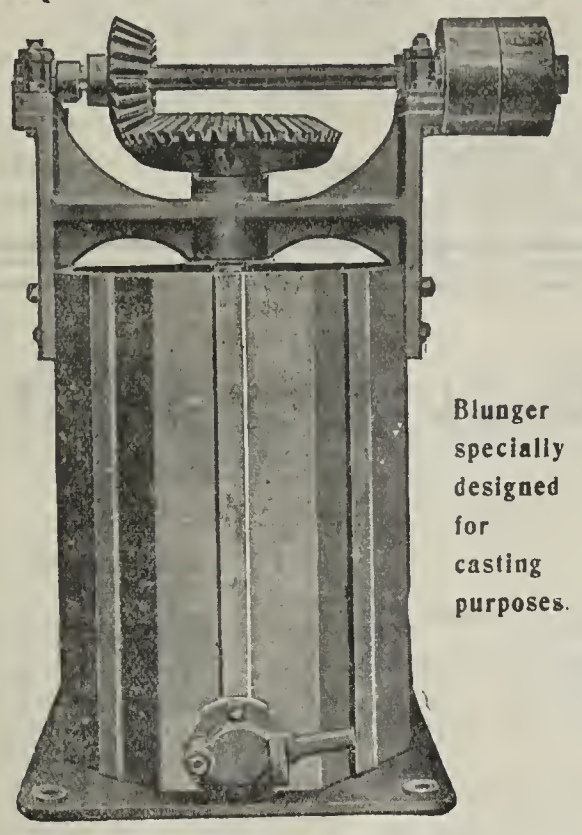
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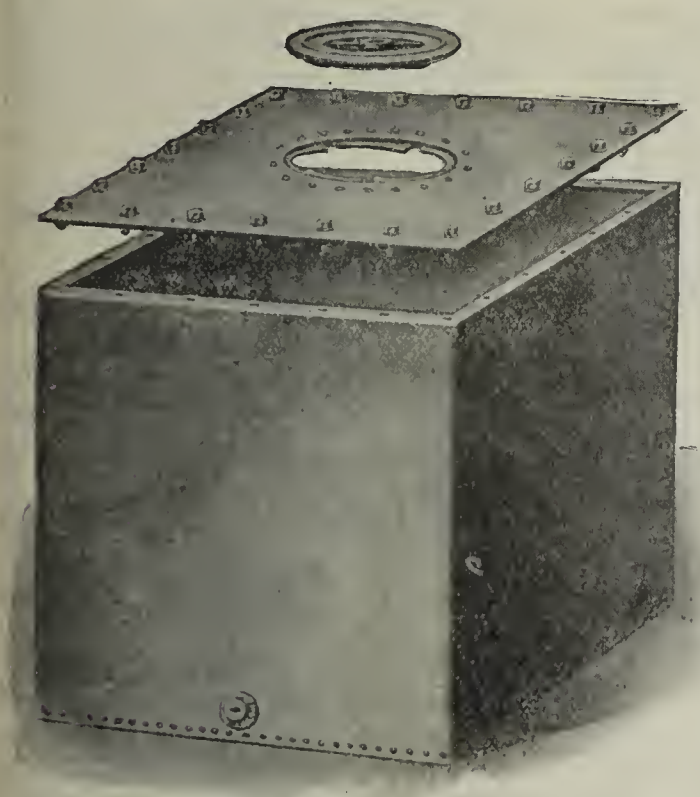
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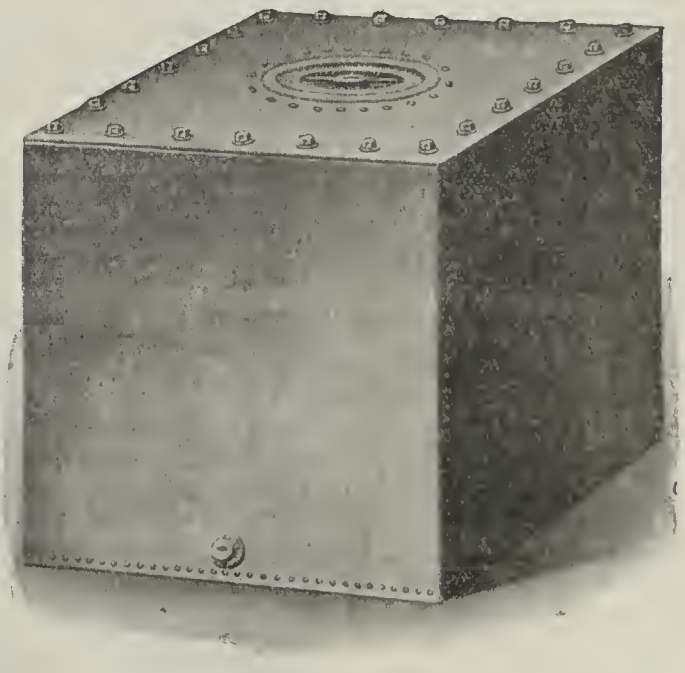
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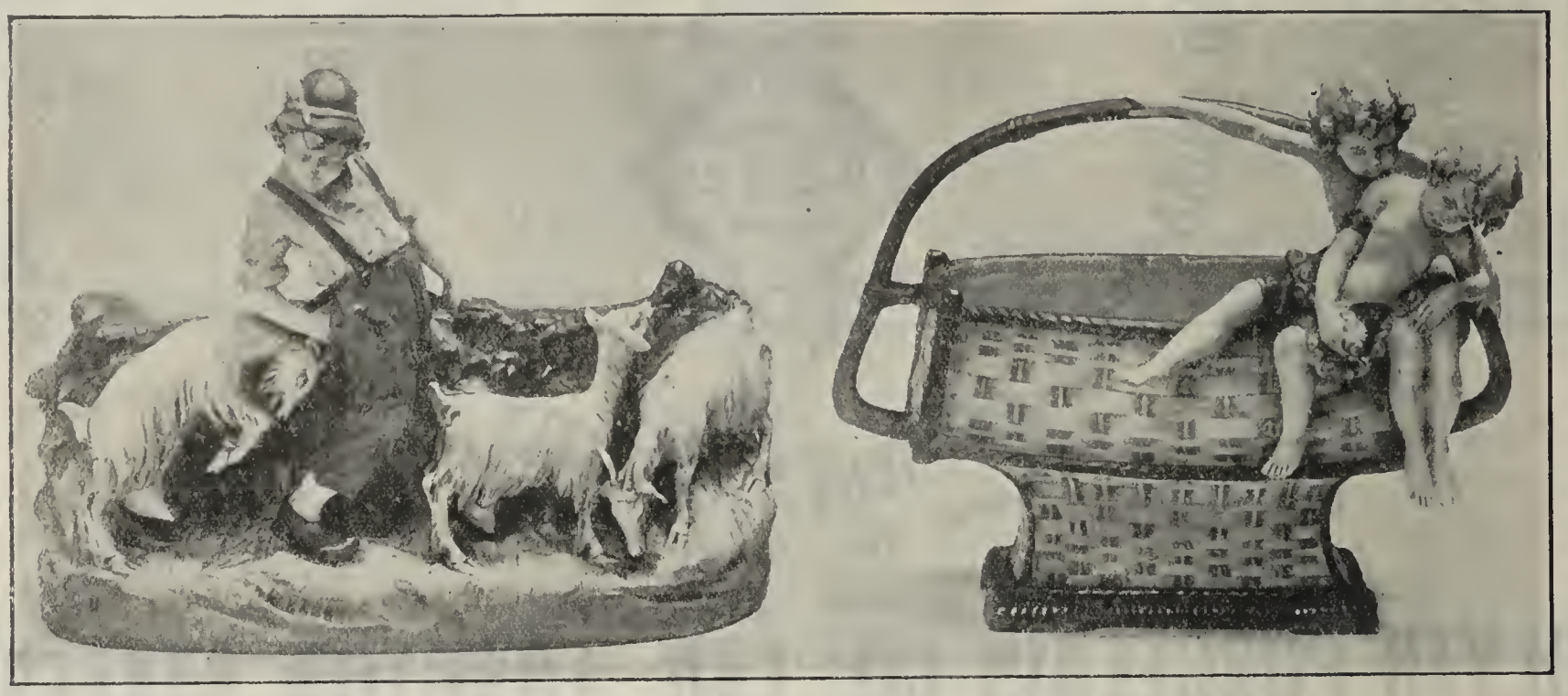
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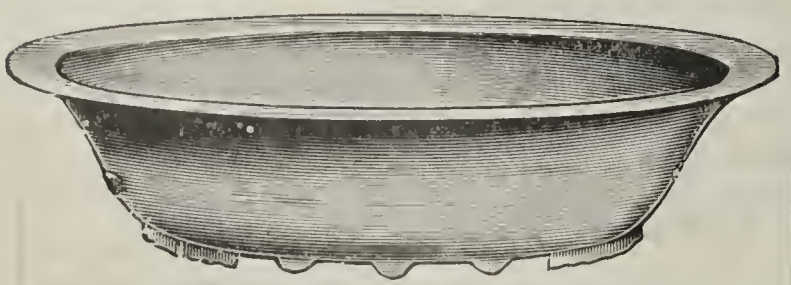
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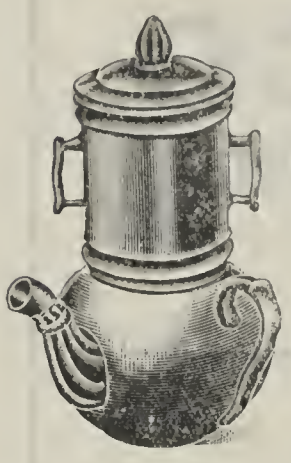
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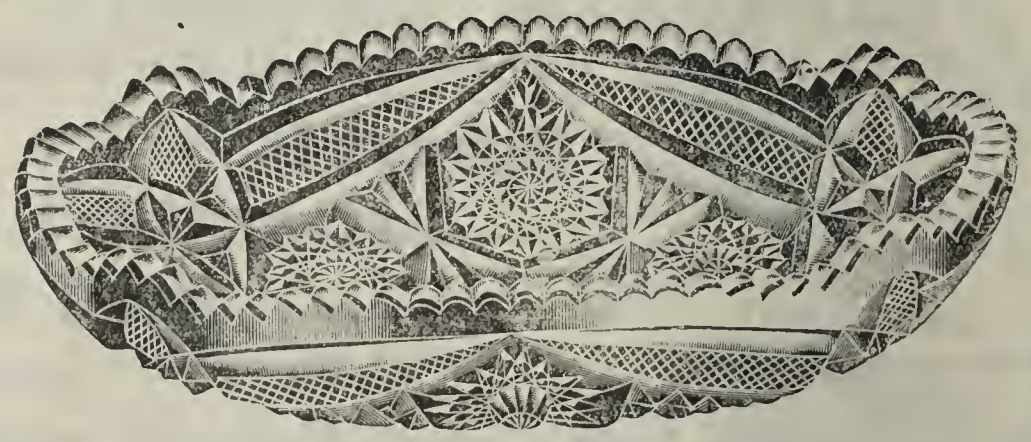
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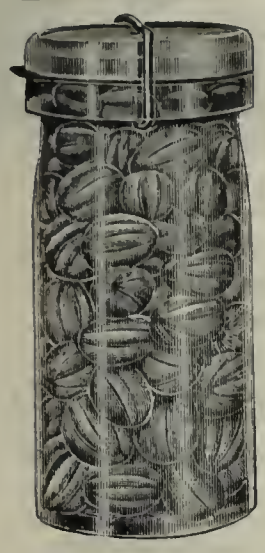
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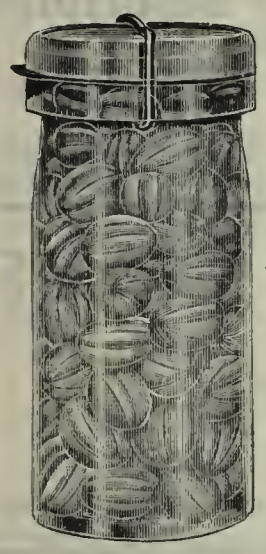
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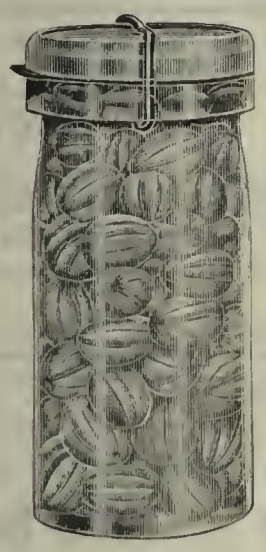
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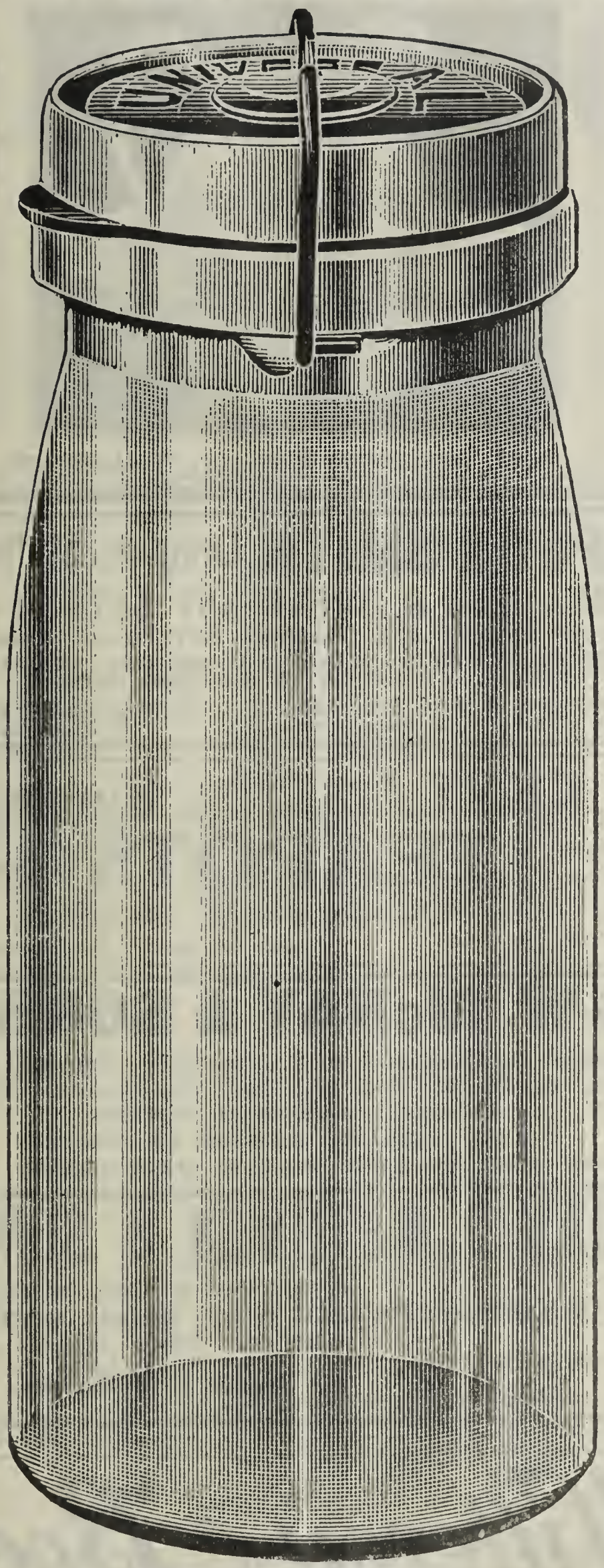


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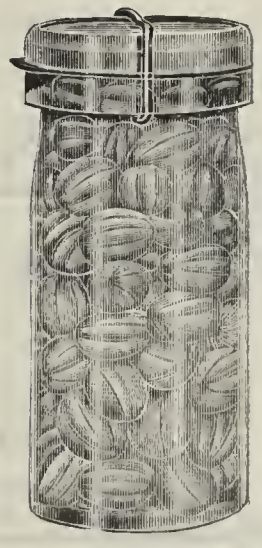


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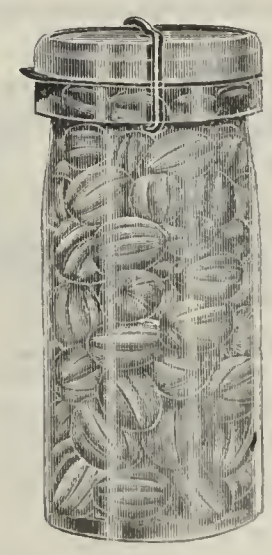
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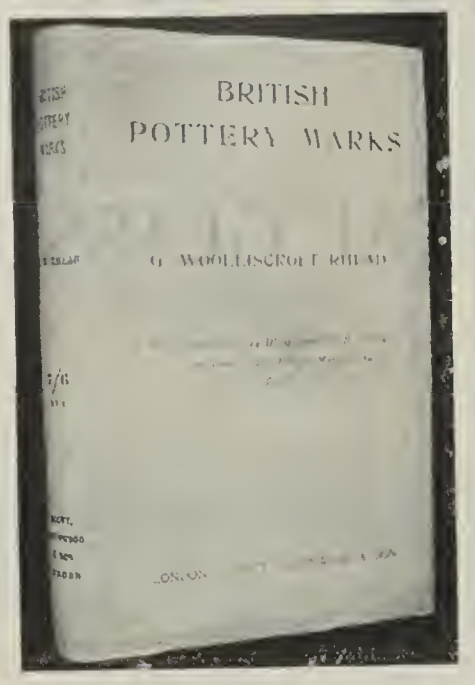
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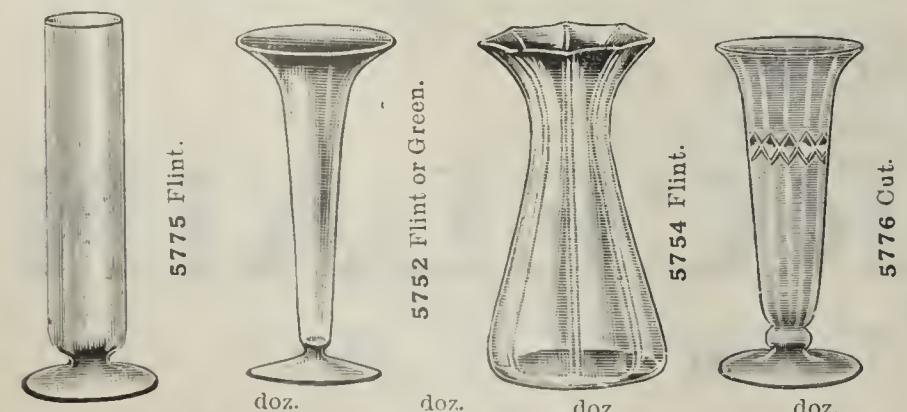
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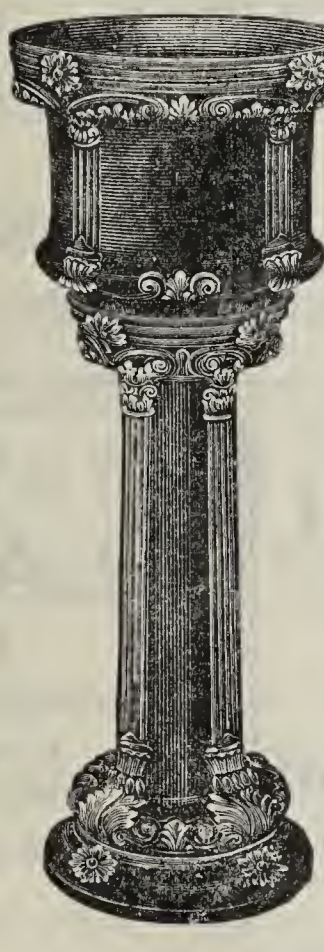
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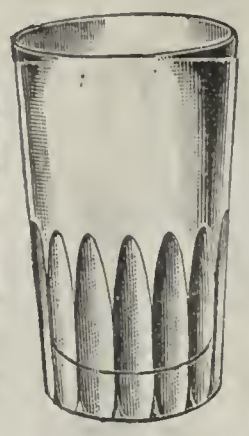


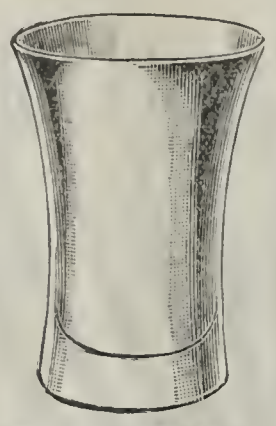
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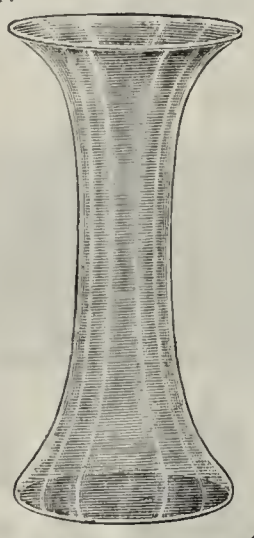
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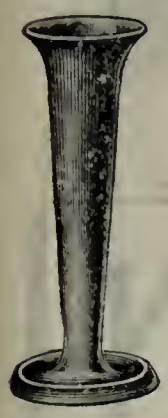
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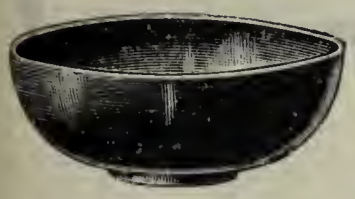
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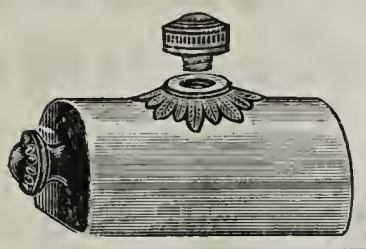


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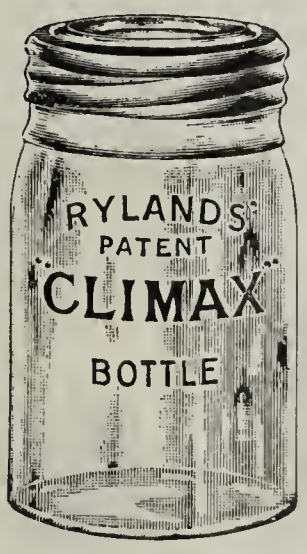
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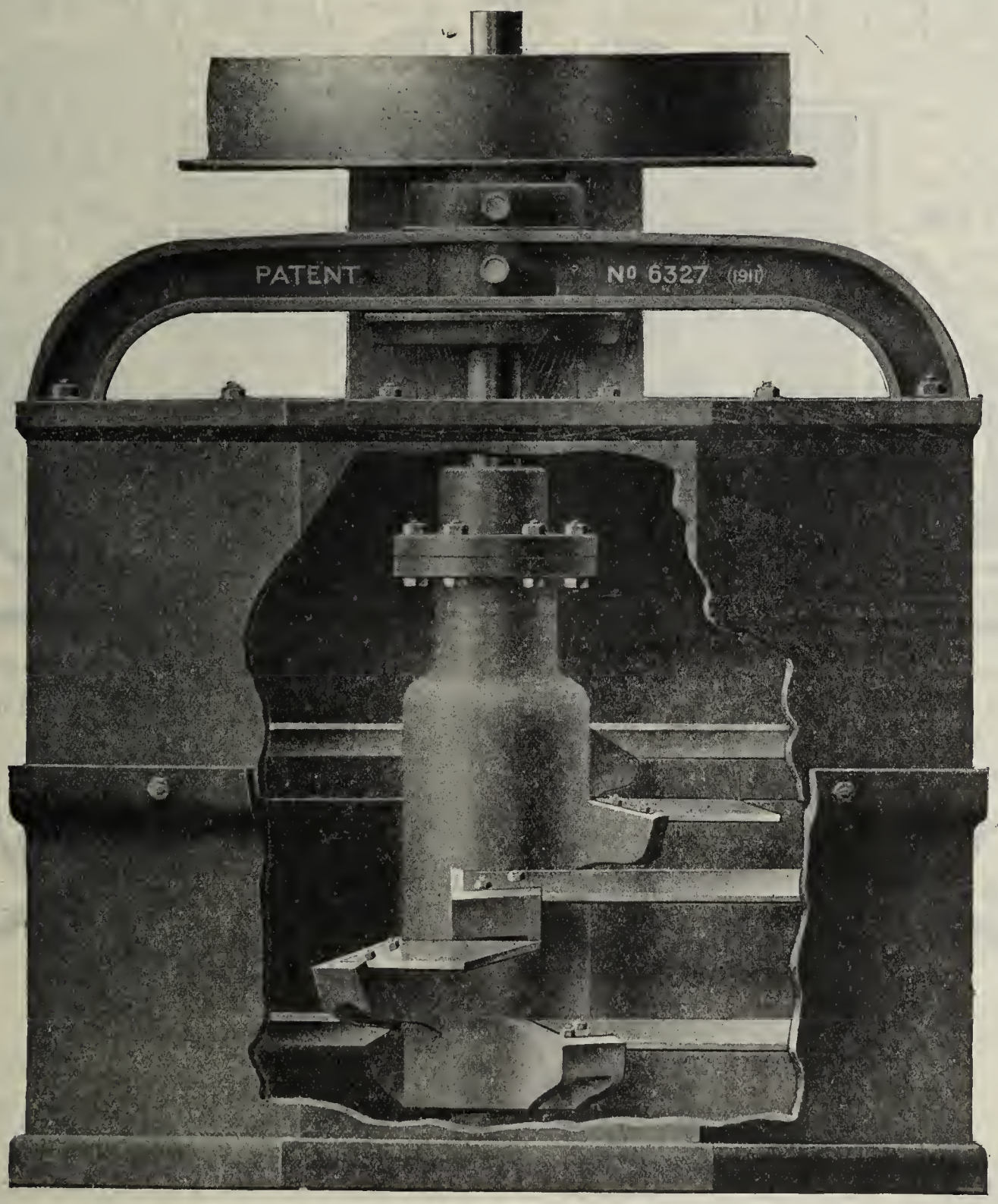
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Editorial Notes.

EDUCATING THE CUSTOMER.

SOME few months ago we printed in THE POTTERY GAZETTE a contribution from a retailer describing how he had exhibited in his shop window a case containing a cup and saucer, with specimens of the materials from which they were made. This, with the aid of an explanatory ticket, proved a great attraction. The potency of the potters' magic in creating beautiful objects from such unpromising origins as clay and stone has an irresistible appeal to the imagination of the public; and we have often laid stress on the importance of making that appeal both forcefully and frequently.

With a view to helping our readers to act upon this advice we have had prepared a full-page photographic plate illustrating the history of a vase from its first beginnings to the finished article. The plate, with a few descriptive notes, will be found elsewhere in this issue. The back of the page is left blank, so that the picture can be cut out, pasted on cardboard, framed, and either used as a window ticket or hung up inside a shop. It will thus, we hope, assist the dealers who make use of it by attracting the notice of potential customers and fixing the attention of the casual observer. It can also easily be made the text of a little homily on the increasing cost of the materials, and therefore of the finished wares, as suggested in our Editorial Note on "What Every Retailer Ought to Know," in our February issue.

Another way in which customers should be educated is referred to in several places in this issue, and particularly in the report on our latest prize competition. The additional profit and pleasure derived from selling superior rather than inferior goods is so great as fully to repay the trouble necessary to elevate the public taste. Dealers who labour to impress upon the customer that "We needs must love the highest when we see it," will find that the results fully reward their painstaking efforts; while, in doing this, they themselves will learn to appreciate more fully the good points of the better class articles, and so become more conversant with the qualities and possibilities of their most attractive wares.

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THE BUSINESS SIDE OF HUMANITARIANISM.

HUMANITARIANISM, thanks to the misdirected energies of certain well-meaning but ill-informed persons, has an unwelcome sound to many of the manufacturers of this country, being often associated with prejudice, intolerance, and fanaticism. It has, however, another aspect, which is very well illustrated in the report published in this issue of THE POTTERY GAZETTE of Mr. C. R. Pendock's recent lecture at Stoke-on-Trent, dealing with "Methods of Ventilation and Dust Removal in Pottery Workshops." Mr. Pendock, who is one of His Majesty's factory inspectors, and who has recently been transferred from the important Derby District to a district of even greater importance, to wit, the Potteries District of North Staffordshire, is an undoubted expert in such matters, and his lecture t hrough out is keenly interesting, and of definite industrial importance, especially considered in conjunction with the new regulations adopted by the Home Office, which are shortly to be put into force. A supply of pure, fresh air is necessary for the well-being of the human mechanism which is responsible for the manipulation of mechanical plants ; and the latter may be brought to a dead stop, or at least to partial derangement, through a weakening or breakdown of the former. Therefore, however irksome and expensive the Government Regulations may temporarily prove to be to employers, if such stipulations result ultimately in increasing the productive efficiency of the operatives, they will prove a good investment from a business point of view, apart altogether from the purely humanitarian aspect of the case.

TRADE NEED NOT GO PAST ENGLAND.

ONE of the most painful recollections of our school-days is the memory of the occasions when we first learnt that the arms of England had not always been victorious on the battle-field ; that there were a few occasions on which the soldiers of our beloved country had suffered reverses. Akin to the sadness caused by that knowledge is the feeling of regret that we experience when we find that, here and there, British manufacturers of pottery and glass have been defeated in open competition by foreign rivals. This has been due in some cases to customs duties, but not in all, for often the competing goods have had to surmount an equally high tariff barrier ; in other instances an inferior degree of adaptability to the requirements of the market or sheer supineness and neglect of opportunity have been at fault. Or, again, the conditions have been considered too uncertain or the profits too small to justify the trouble necessary to open out in a new district. But, whatever the cause, the fact is certain that ground has been lost from some cause or another in certain directions. We know of markets in which the wares of this country are regarded as of minor importance ; and we have met foreign makers of certain lines who look upon British competition as a negligible quantity.

This need not be the case. We say emphatically, in this special issue of THE POTTERY GAZETTE, which reaches thousands of buyers in all parts of the world, that there are some British manufacturers enterprising and capable enough to supply practically any class of ceramic goods, while their known thoroughness and the reliability of their products render it quite worth while for buyers in distant lands to be at some pains in instructing them as to the special requirements of their particular locality. Other firms perhaps have not reached such a high pitch of adaptability, but all are learning that by that quality only can they maintain their position in the world's markets, and we are sure that as they realise this they will set themselves, with characteristic perseverance, to improve their methods and to ensure the future prosperity of the ceramic industry in the United Kingdom.

FOREIGN TRADE IN FEBRUARY.

THE export trade in February was well in advance of the corresponding month of last year, amounting to £265,631 as against £248,308. It was, however, considerably below that of the preceding month, though this has no very striking significance, for the February business is generally less than that of the first month of the year. The quantities of ware shipped were also more considerable than in the same month of last year, namely, 305,472 cwts., compared with 294,049 cwts. Canada maintained its place at the head of the list of countries with exports of the value of £35,951, as against £30,449 in the same period of last year. The South American trade was excellent and well in advance of the preceding month and of February, 1912. The value of shipments to Brazil reached £29,329, as against £16,170 in the corresponding month of last year ; and to the Argentine £27,586, as against £23,445. Trade with the United States, amounting to £30,548, was below that of February of last year, when it reached £31,961. The East Indian business was also on a lower scale, being of the value of £20,397, as against £21,047 in the corresponding period of last year. The South African, on the other hand, was over £2,000 better than twelve months ago, but less than in the preceding month. The most serious declines were in regard to trade with the Antipodes. Australian shipments were only of the value of £25,445, compared with £32,535 in the corresponding month of last year ; and those to New Zealand £10,948, compared with £13,609. Continental business was rather better than a year ago, but less than in the preceding month. Trade with "other countries" was of the value of £60,659, compared with £58,701. Contrary to what has obtained for a long time past, the month's increase of exports was in goods other than earthenware and semi-porcelain, which represented £4,000 less than in the same month of last year. Exports of china were nearly £3,000 over those of February, 1912 ; tiles, more than £1,000 ; electrical ware, &c., £1,600 ; red pottery, stoneware, brown and yellow ware, nearly £8,000 ; and sanitary ware, nearly £8,000. For the first two months of the year the exports were £557,150, as against £499,365 in the corresponding period of last year. The imports for February amounted to £79,589, as against £72,169 in the same month of 1912.

DO INTERNATIONAL EXHIBITIONS PAY?

THE report of the British Commissioners for the Brussels, Rome, and Turin International Exhibitions, referred to elsewhere in this issue, contains one section to which we wish to direct our readers' particular attention. The Commissioners say they were anxious to ascertain as far as practicable what commercial results had accrued to British exhibitors from participation in the Brussels and Turin Exhibitions. With this object the following questions were submitted to all British exhibitors at these Exhibitions :—

(1) Have you had, up to the present time, any development in your business which you can attribute directly or indirectly to the exhibition of your goods at Brussels (Turin) ? (2) If so, can you give any informa-

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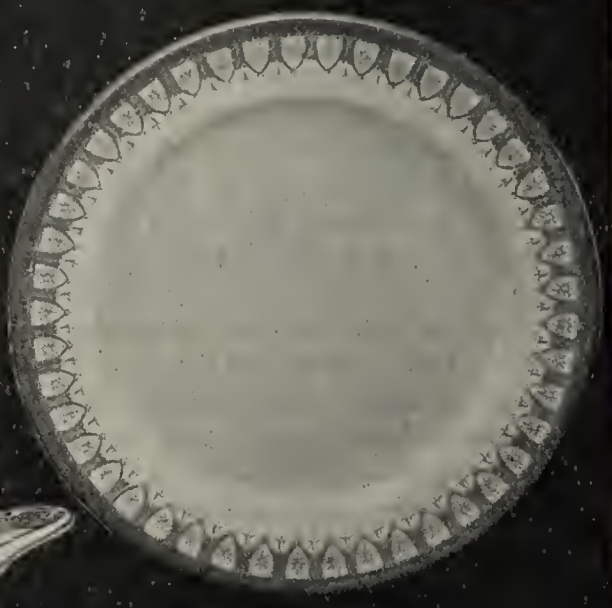
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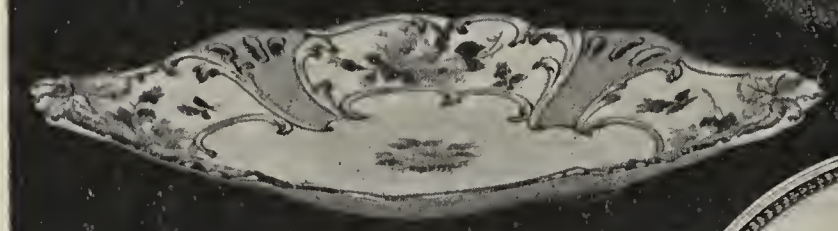
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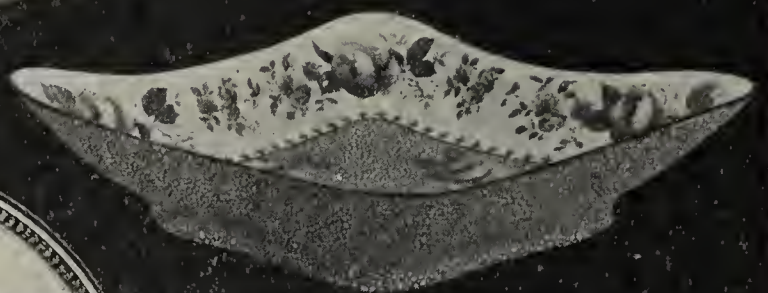


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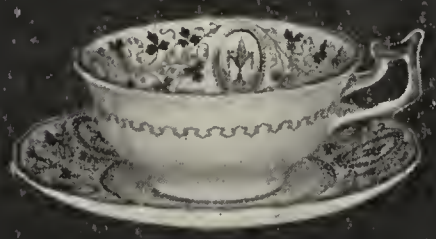


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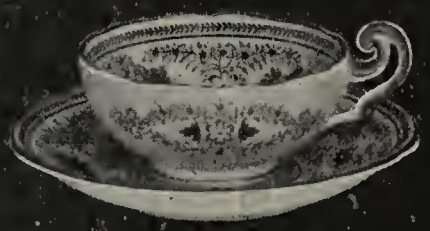


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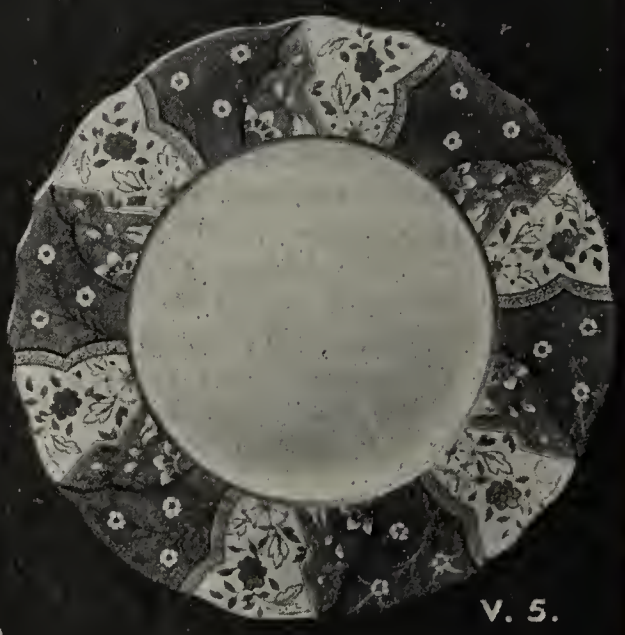
DELHI DURBAR.
V.R.I. 1877. E.R.I. 1903. G.R.I. 1911.



V. 757.



N. 7308.



V. 5.

STOKE ON TRENT.

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NEW YORK:- 46. WEST BROADWAY.

PARIS:- 3. CITÉ TRÉVISE.

HAMBURG:- 84. ADMIRALITATSTRASSE.

ST. PETERSBURG:- APRAXIN DWOR-ANTONOWSKY PROJESD. 11/12.

tion as to the extent or value of such development? (3) Have the sales effected as a result of the exhibition of your goods at Brussels (Turin) repaid you for the cost of exhibiting? (4) Have you any observations to make with regard to any improvement which might be made in the organisation of British exhibits at future exhibitions?

The answers received to the above questions were considered on the whole of a very satisfactory character. In the case of the Brussels Exhibition 32 per cent. of the exhibitors stated that their exhibits had produced good tangible results. A further 33 per cent. of the exhibitors indicate that they are satisfied with the result of their exhibits, making a total of 65 per cent. Of the remaining 35 per cent. the great majority simply answer the questions in the negative; eleven express dissatisfaction, but this is due in four cases to losses sustained by the fire.

With regard to the Turin Exhibition, the results reported up to the present are not so good as in the case of Brussels. Only 24 per cent. of the exhibitors reported definite tangible results in connection with their exhibits, while a further 30 per cent. expressed themselves as satisfied, making a total of 54 per cent. who answered the questions put to them in a favourable sense. Ten per cent. express dissatisfaction. The Commissioners say that it should be borne in mind that the time which has elapsed since the termination of this exhibition is hardly sufficient to allow of any accurate estimate of the commercial results which are likely to accrue to the individual exhibitors. They also point out that Italy, being a comparatively poor country, afforded less scope than Belgium for opening up new trade, and refer to the disadvantages of the hot summer, the outbreak of war in Tripoli, and the cholera scare. The Commissioners appear to have lost sight of the fact mentioned by our reporter at the exhibition as to Turin being much less a place of general resort than Brussels.

The Commissioners remark that "the same causes which render it necessary for individual firms to spend large sums of money on advertisements in order to maintain their position in a particular trade, also render it imperative that every effort should be made at the present day to maintain and improve the reputation of British manufacturers as a whole. Experience has shown that even in the cases of firms with an established reputation and world-wide connections attempts to discontinue advertising have usually been followed by a diminution in the sales effected, and the Commissioners feel that the neglect by Great Britain of one of the most important forms of national advertisement would be equally detrimental to her interests as a manufacturing country."

The natural comment that occurs to us in this connection is that business men who reap no individual benefit from such an expensive form of advertising are hardly likely to keep it up from patriotic motives alone. They will naturally turn to more direct and remunerative means of publicity unless in their outlay for the national good they receive substantial assistance in the form of a Government subsidy, as suggested by Mr. T. C. Moore in the article which we quote.

United States Imports of "earthenware, stoneware, and china" amounted last year to the value of $9,711,000, as compared with $10,847,000 in 1911 and $11,320,000 in 1910. The value of the imports of glass and glassware was $7,283,000 in 1910, $6,430,000 in 1911, and $6,303,000 in 1912.

MANUFACTURERS' ACCESSORIES.

(BY OUR OWN REPRESENTATIVE.)

BOULTONS, LTD., Burslem, have earned an undeniable reputation as manufacturers of all classes of potters' machinery. Their establishment was founded in the year 1852, consequently they have now entered upon their sixty-first year. Although, however, one of the oldest and largest firms of potters' engineers in the world, they are not, I should say, carrying on to-day on the laurels and reputation they have won in the past. The year just past has again marked a record so far as regards the volume of business. They are constantly adding to their plant and equipment, and if they cannot do this by increasing the number of their machines, they at least accomplish their ambitions by increasing their efficiency. The last twelve months have witnessed several important additions. It is well known, of course, that this firm are the makers under licence of a patent tile coating or dipping machine, which is made in several types, and is employed by quite a number of the leading tile manufacturers. The latest production of the company owning the patents of this tile coating machine is an appliance for sizing and measuring the warp of tiles, which I was privileged to inspect at the time of my visit. It is really a marvel of ingenuity, and it is only necessary, I think, in order to justify this statement, to mention the fact that it will measure and stamp 25,000 to 30,000 6-in. tiles per working day of ten hours, at the same time measure the convexity or concavity of the tiles, and not only so, but simultaneously register by a stamp on the tiles themselves the size and degree of warp, and whether concave or convex. One can, of course, confidently anticipate that this machine will claim close attention from the leading tile makers. Boultons, Ltd., have been obliged to add recently another floor to their machine joinery department. They make huge quantities of filter presses, sifters, &c., and I am given to understand that the demand for their patent rotary sifter has never eased off since its introduction. The potters are still faithful, I am told, to the old Needham and Kite type of filterpress, and Boultons, Ltd., are experiencing all the time a steady demand. Amongst the innovations I noticed was an experimental sliphouse, fitted with a pulverising cylinder, where experiments with actual clays are conducted by them for their potter friends. Mr. E. Johnson, the firm's manager, rendered me every assistance. I was left to imagine the extent of the firm's trade. They were too modest to tell me, but as an indication that they are moving I may mention that I observed a 7-ft. pulverising cylinder leaving the foundry on a railway wagon at the time of my visit. Boultons, Ltd., have a new patent blunger having tangential knives and ball bearings, and I understand it is experiencing a good run. The principal claim for it is that it can be run with half the expenditure of power necessary to drive other types of blungers.

EDWARDS & JONES, Globe Engineering Works, Longton. —This firm are solely manufacturers of potters' machinery and mill appliances, and make a speciality of revolving sifters. They have a patent filter press, with which I am told they have done extremely well, and when I called at the foundry I found all departments exceedingly busy, though I was favoured with a short interview by Mr. Jones, and had the opportunity of viewing a number of appliances about to be sent out to various factories. I was very interested in the new patent revolving sifter, which has only been put upon the market some six months. Several complete sliphouse plants have already been finished off this year, and a number of others are in work, and I was allowed to see them in course of construction.

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THE MOST ARTISTIC BRITISH POTTERY OF THE CENTURY

The firm also make a speciality of their patent china pug mill, throwers' wheels, &c. My inspection included the smithy, the fitting and turning shop, which is splendidly equipped for the work, the pattern shop, foundry, and stock-rooms. My impression was that the firm are alive to the necessity of securing the most modern appliances, and this view was strengthened when I learned that they have recently installed a special plant in their foundry for wheel moulding, which I was subsequently permitted to witness. The pattern shop is some 150 ft. in length, and is well utilised. In the warehouse quite a big stock of all kinds of finished potters' machines is held in readiness, and I learned in the course of conversation that the trade of the firm is not merely confined to the local Staffordshire potteries, where, however, they fit up some of the largest concerns, but it extends out considerably, and at the present time they are fitting up a Yorkshire factory complete. The premises are compact, and have seen several additions quite recently. Several other important extensions are contemplated, a portion of which will come within the present year's programme.

Wengers, Ltd., Etruria, Stoke-on-Trent, recently favoured us with some particulars as to the classes of articles which they are finding in most demand just now. Liquid lustres, they say, have recently found numerous fresh applications, as, for instance, on toilet ware; by using the iridescent lustres over coloured grounds in underglaze colours an effect of rainbow shades of the most pleasing kind is produced. This is also applied to fancy goods over matted grounds with artistic results. The yellow and golden orange lustres are also being very largely used on white ware, producing a most rich effect. The ruby, copper, and pink lustres are being freely used in the reproduction of Staffordshire ware, while the silver and platinum lustres are being extensively applied in reproducing the charming patterns of the famous Reserve Lustre teapots and jugs, antique examples of which are so greatly apprcciated by collectors. On flower vases, &c., still another fresh application of their lustres is being made, the superposition of the lustres over one another, with, of course, a kiln fire between the various applications, producing unexpected effects, and a novel class of goods. The methods of decoration used at Copenhagen have created a new taste for delicate grey patterns applied on the ware with stencils, and to meet this Wengers, Ltd., have quite a new palette of suitable colours, both over and under the glaze. The public have shown by the high prices which have recently been paid for Chinese ware of the seventeenth century, decorated in the style of that time, their appreciation for that type, and are calling for reproductions of this class of goods which were then produced to such perfection by the Chelsea, Derby, Worcester, and Lowestoft factories, and also by Mason and Spode. Manufacturers are now desirous of matching them, and for this purpose again require a special series of colours, both underglaze, enamel and relief, espccially the pinks and turquoises so characteristic of the old Chinese. Since my previous visit the collection in Messrs. Wengers' museum has been enhanced by the addition of a number of specimens of old English ware, as well as some of the best pieces from the Solon Collection, such as the renowned St. Jerome piecc, the Whieldon teapot and others, whilst they have also added a number of Asiatic and commercial specimens, which they will be pleased to show on request to those manufacturers desiring to inspect them, and from which manufacturers would, doubtless, find suggestions suited to their requirements. The high price of white lead has induced those manufacturers, the quality of whose wares admits of leadless glazes, to use them more freely, and Wengers, Ltd., are manufacturing a number of leadless glazes, fusing at the temperatures required respectively for earthenware, stoneware, tiles, bricks, and whether transparent, opaque, or coloured. Having greatly increased their plant for grinding, they are in a position to supply ground materials of specially reliable and superior qualities in flint, stone, whiting, and particularly in pink and white feldspars. Their No. 50 price list should be consulted by all potters.

The Rapid Magnetting Machine Co., Ltd., of 18, The Crescent, Birmingham, announce that as their electro-magnetic separators for treating liquid slip and dry material such as bone ash, &c., are now being used by some of the most important firms in the Potteries, they have decided to give the whole of the pottery trade another opportunity of seeing this apparatus at work, and have for this purpose taken a room at 32, Waterloo-road, Burslem, where they will demonstrate machines for treating slip and glaze and bone ash, &c., commencing on Monday, March 31, and concluding on Friday, April 11. This demonstration will be open to any one presenting a pottery trade card, and the company will be prepared to treat samples free of charge in the presence of the bringer. In order to prevent disappointment in this respect it would be preferable that appointments should be made beforehand, to prevent overlapping. The company cordially invite anyone who has any interest in the apparatus to call and see it between the hours of 10 a.m. and 1 p.m., and 2 p.m. and 5 p.m., and at other times specially by appointment, Saturday excepted.

Wood, Mitchell & Co., Ltd., Oriel Works, Park-street, Hanley, are art printers, lithographers, bookbinders, commercial stationers, designers, engravers, and illuminators, specialising in pottery, glass, tile, and furniture illustrating. Calling upon them recently I found them as busy as ever, every branch of their extensive establishment being in full swing. The business was acquired by the present company some twelve years ago, during which time they have made very rapid strides. They have a very convenient building for their purpose, as it is all on the ground floor, and covers a thousand square yards. The communication between the various departments is quite uninterrupted, except in the case of the artists and designers, who occupy a separate and private room for obvious reasons. Although a comparatively young concern, the business has quickly assumed extensive proportions and has earned an undeniable reputation. Especially is this so in that department of the business which specialises in colour reproductions of china and glass. In this connection the firm is perhaps better known than in any other, at any rate they have taken advantage of their surroundings to cater for the needs of the pottery manufacturers and the retailers, and that they have accomplished what they set out to do is clear, because there is not a manufacturer in the Potteries who does not know of the high-class productions in the direction of lithographs by Wood, Mitchell & Co., Ltd. The firm always maintains a high standard of work, and this is doubtless the reason of their constantly increasing clientèle. The repute of the company has travelled far beyond the borders of Staffordshire; indeed, I understand that from Edinburgh downwards they have now a sound connection. So far as catalogue work is concerned they are, of course, experts, and are called in to act in an advisory capacity by many large business houses when compiling their annual or special catalogues. The firm have had a long experience in this class of work, for Mr. J. A. Wood, the acting partner, served for a quarter of a century with the late renowned firm of Albutt & Daniel, Ltd., previous to the formation of the company with which he is now associated. I was privileged at the time of my visit to walk through the entire building, and was impressed by the character of the plant and the huge

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volume of business handled. Lithograph sheets illustrating pottery, glass, and furniture they turn out in tremendous quantities, proving that the resources of the firm are very complete. They have some of the finest artistic talent, most modern mechanical improvements, and "efficiency" is read all over their work. Their illuminated addresses are really charming, and it may be recalled that in 1904 they secured the highest awards, first-class diploma and medals, for illuminated addresses, illustrated pottery pattern sheets, letterpress display art printing, and book and booklet cover work at the Allied Trades' Exhibition, Agricultural Hall, Islington, London, N., an honour of which they feel justly proud. Amongst the latest lithograph sheets coming from the press was a beautiful sheet of Spode designs, the brilliancy of the colours being absolutely true to the original pieces. Wood, Mitchell & Co.'s penny time-table is now in almost everyone's pocket in the Potteries, and is a capital little production, being a real time saver as well as a time teller.

THE DRESSLER TUNNEL OVENS, LTD., of 2a, Wetherby-terrace, Earl's Court, S.W., have submitted to us a report on their Dressler Tunnel Oven written by Herr Cramer, of Berlin, and published in Germany during March. The synopsis of Herr Cramer's report is as follows:—(1) The Tunnel Oven has hitherto been an unreliable apparatus that could only be handled by skilled workmen, whereas the Dressler Tunnel Oven is so sure in its operation, and so simple to work, that unskilled labourers, without any previous knowledge, can manage it easily. (2) Owing to the circulation of air and the special construction of the oven, perfect and unfailing uniformity of temperature is automatically obtained. (3) In the ordinary muffle kiln gases, which are generally under pressure, are rarely absent. In the Dressler tunnel oven the gases are kept under vacuum, and therefore damage to goods from moisture, fumes (sulphuring), or dust is made impossible. (4) The mechanism provided for regulating the complete combustion of the gases is very efficient. (5) The exact temperature required is obtained and maintained with ease. (6) The structure of the oven does not suffer during the firing, owing to the fact that there is no variation is temperature. (7) The oven is a sound, practical and durable apparatus. (8) The complication of sand troughs is done away with. (9) A very simple and efficient method for dealing with the truck problem has been adopted—no wheels by rollers being used. (10) The economy in fuel, great as it is, must rank as less important than the saving of all wasters. Dunting is practically eliminated. (11) The quality of the goods turned out is unsurpassed. The report is based on an inspection of an oven installed for J. H. Barratt & Co., Ltd., tile manufacturers, Boothen Tile Works, Stoke-on-Trent. The firm themselves have given the following further testimonial:—"We have now been working the oven continuously for 182 days (six months), and it has given, and is still giving, entire satisfaction. Upon our output since it has been working we have actually saved 1,082 tons of coal; of the labour employed for the same output by glost kilns we have made a very considerable saving. During the six months we have been working the oven the cost of repairs has been quite negligible; we have obtained a very much higher percentage of best quality goods as against the glost kiln method." Some idea of the construction of the ovens may be gathered from the accompanying illustration, but fuller particulars are given in a booklet prepared by the company, containing a full translation of Herr Cramer's report.



THE DRESSLER TUNNEL OVEN.

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

A TRADE OPENING IN CANADA.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Could you give me the names of any firms who have Canadian agents, or any who are doing a Canadian trade, whom I could communicate with? I have a brother out in Winnipeg who is anxious to open up a crockery store, and I think it will be best for him to buy on the other side rather than I should buy for him on this side.—Yours, &c.

Leicester, March 3. INQUIRER.

[Letters from advertisers or subscribers in answer to the above inquiry will be forwarded to the writer if sent to our office, with sufficient postage.—EDS. P. G.]

THE CONDITION OF THE BRITISH GLASS INDUSTRY.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—It is an old adage that all history tends to repeat itself, and to a careful observer this is very often manifest. This is not only the case in things national and political, but it is often so also in the industrial. Industries rise and fall from various causes as do nations, and some pass away altogether, and are declared extinct. To the



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initiated it does not require a great amount of the prophetic spirit to predict the fate of the British glass industry, that is, the domestic or table and general flint glass trade. When one knows something of the gradual reduction of glass houses, and something of the gradual degeneracy of the operatives, it makes one think that history is about to repeat itself in this particular case, and that we shall have to resort again to the alien element, or take their wares.

The record trade boom has come and caught the British glass trade napping, because now that there is a big demand for British goods there is also a great deficiency of skilled workmen to make it. Why? Well, this, of course, is a very debatable question, and, no doubt, the above circumstances are the result of various causes, but the greatest and most serious is the deficiency of artisans. The lamentable shortage of skilled men to fill the top places in the trade can easily be traced to the rise of the school age of the children, and the consequent lack of desire of "second" and "third" hands for promotion.

The rise of the school age of children was, no doubt, a step in the line of progress, and we must appreciate such legislation, but, nevertheless, it has been the "spragg in the wheel" of the glass industry. All the "workmen" (top man in a set) of to-day, or almost all, started to work at the age of nine or ten years, and were "takers-in" for about two years, and then "stickers-up" for one or two years, and so at the age of 14 were ready for apprenticeship as "footmakers," and at 21 years of age could then go on as "servitors." What obtains now? A boy cannot start in the glasshouse under 14 years of age, and then has to go through the stages of "taker-in" and "sticker-up," and this generally brings him to 17 years, and many to 18 years of age, before he is ready to go on as an apprentice footmaker, and he can only then go on when a vacancy opens out for him. So the lads, realising that they are in a blind alley occupation, leave this situation and seek for one with a better prospect for their future manhood. This results in a 21-years' footmaker not being efficient to go on to be a servitor if an opportunity occurs.

By the time he becomes a "servitor" he has probably reached 30 years of age and has lost all desire for any higher promotion, and scarcely ever reaches the stage of skilled "workman," or first hand in a set, because he will probably be 35 to 40 years of age before he can get an opportunity to go on. And so, as the "workmen" pass away the difficulty of replacing them becomes keener and keener; in fact, in many instances, it is simply impossible to obtain them. (N.B.—A "shop," or set, generally consists of a workman, servitor, footmaker, sticker-up, and taker-in, all of which stages each must pass through to become an efficient "workman.")

The problem that now confronts us is, how long will the trade last under the proposed new boy labour laws, which raises the starting age to 16 years, and when will he become an "efficient" workman? Is there a remedy for this state of things, and can it be applied ere it be too late? This is a question that should occupy the attention of all parties interested. Sirs, after 30 years' experience in the flint trade, I have come to the following conclusions which I beg to submit.

There is a remedy, but it is one which requires the principles of co-operation by all concerned. Co-operation, as profit-sharing, or as follows. If boys are not allowed to commence work under 16 years of age, they will want a wage commensurate with that age, and this the public will have to help to pay. The trade union will also have to come more into line, and for their own sakes will have to seriously reconsider their apprentice and promotion laws.

There will have to be a more compromising attitude between employer and employee, a getting back to the old days of familiarity which used to exist between them, and which was for their mutual good and benefit. The employer will, with the public, have to pay for the loss sustained by the promotion of workers from stage to stage, until they become efficient leading hands in a shop. They will have to also curtail somewhat their demands for correctness of detail in production and be a little less critical over more important matters.

Trusting this will elicit further correspondence on the matter and help to reveal to the public the serious state of an important industry, which is so little understood by them.—Yours, &c.,

March 14, 1913. J. PEARCE.

ANSWERS TO CORRESPONDENTS.

Belgian Subscriber.—We cannot trace any manufacturer of ceramics whose initials are L. S. & S., and we are inclined to think that they may be those of some dealer or agent.

L. W.—We cannot trace the maker of a dinner ware pattern called Lake, although we appear to have some recollection of such a pattern having been made by a firm called Turner & Tomkinson, but they have been out of business many years.

D. S. S.—We regret being unable to give you the maker of toilet ware as your sketch. There is nothing sufficiently distinctive in the description you give that calls the pattern, shape and number combined to our mind. The shape is one similar to thousands we have come across in our travels and are seeing daily. Green edge, pink roses over body of ewer is a pattern made by scores of firms now in existence, and is one that has been made by scores who have ceased to manufacture, and 7737 as a pattern number can be used by any and every manufacturer in the Potteries. We advise you to examine carefully every piece of the service and try to find some maker's marks or initials thereon, and write us again.

B. B.—It is not possible for us to give you name of maker of toilet ware registered numbers 285,970 and 248,631, for the simple reason that no such registered numbers have ever been given to a design for toilet ware, so that it is quite evident you have incorrectly copied some of the figures. We made a very long search in our endeavour to oblige you, and we assure you it did not add to our pleasure to find that the registered numbers you have given us have been applied to articles entirely different in character to toilet ware. It is very important, and cannot be too strongly impressed on inquirers, that it is absolutely indispensable that each and every figure of a registered number must be correctly copied, otherwise disappointment will certainly result.

The China Clay Export of Austria-Hungary amounted last year to 181,870·9 metric tons, as compared with 169,159·1 m. tons in 1911 and 159,655·9 m. tons in 1910.

Canadian Pottery Imports during the six months ending September, 1912, were as follows:—Earthenware and chinaware: Tableware of china, porcelain, white granite or iron stoneware, United Kingdom, $674,171; United States, $15,195; Austria-Hungary, $39,485; France, $91,070; Germany, $183,823; Japan, $52,909; other countries, $9,739; total, $1,066,392. Other earthen and chinaware: United Kingdom, $220,695; United States, $274,232; Germany, $21,183; Japan, $7,266 (d); other countries, $19,794 (d); total, $543,170. The few decreases are denoted by (d).

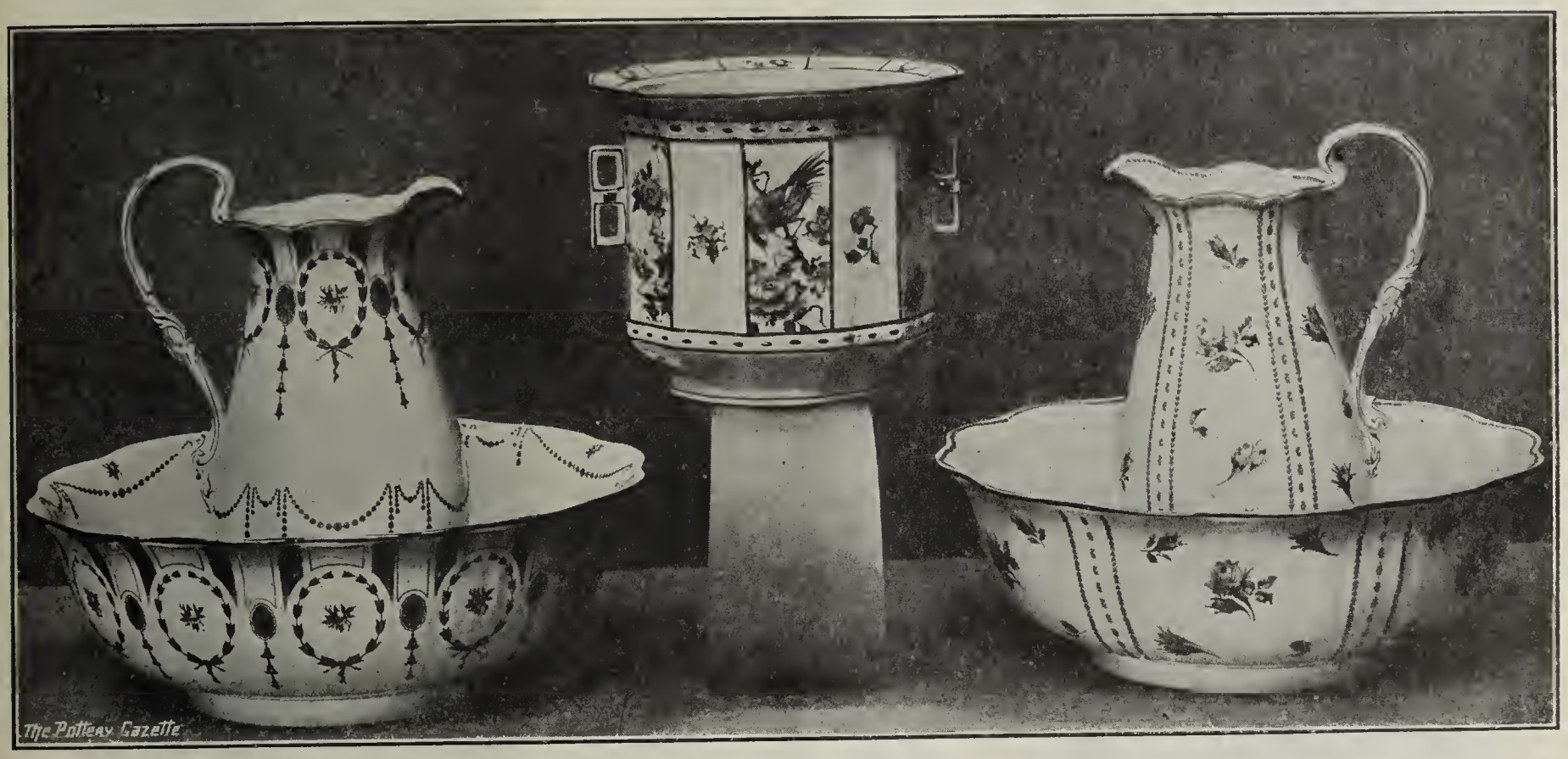
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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

A. J. Wilkinson, Ltd., Royal Staffordshire Pottery, Burslem, who are represented in London by Mr. F. W. Jukes, at St. Andrew's House, 34, Holborn Viaduct, E.C., have at the present time a handsome range of toilet patterns on show there; indeed, the toilet display is an outstanding feature, and at once called for remark. The newest shape is the "Acme," and this is on view in a multitude of styles and decorations, ranging from a very moderately priced set to medium. We are glad to be able to illustrate decoration No. 4,414, which is enamelled in green, with a coloured rosebud in garland. This can be and is supplied in various colours, and the changes are well rung in the samples now on show. There is first of all a one-colour scheme, then a double-colour scheme—of course, correspondingly more expensive in price—and afterwards the same pattern is used as a basis, with the addition of a self-coloured base, and self-coloured panels round the rim of basin. The same shape with design No. 4,386 has panels of moss roses with bay stripes and roses intervening. This has already found favour, and distinctly emulates a china pattern. The No. 4,454 pattern, also on the "Acme" shape, has a background of lacework in pale grey, shading to blue. This is another type of decoration which is proving very successful. Amongst other institutions, a new basin has been brought out to the "Warwick" shape ewer, which has now converted this into a much more useful set, and the improvement has, we are told, greatly increased the sales. Nos. 4,176 and 4,177 decorations on this shape show a shaded panel type of decoration with heather border, one being done in heliotrope and the other in pink with the addition of a rose stripe. The "Stanley" shape has been brought out with aerograph shadings under the Nos. 4,533 and 4,534. The same shape is also employed for pattern No. 4,491, which is of coloured Indian birds within panels above a pale blue ground. The "Cambridge" shape ewer and basin is a very sensible shape, and the "Queen Alexandra Rose" pattern which has been adapted to it is another design emulating the effect of a china toilet. Turning to dinner ware, pattern No. 4,546 is perhaps the very latest, and is known as the enamelled "Filey." It is a very neat border pattern, treated in cobalt blue, red and gold, Derby style. This is being brought out at a very reasonable price, and it is confidently expected that it will accomplish great things. It can be had with either round or oval cover dishes, both of which are on show. Another new dinner pattern is the "Yale Border," which is treated first in single prints and afterwards in enamels, in a variety of colours and styles. In flowerpots the "Buxton," "Rowsley," and "Belle" shapes have been prepared specially for the season; in fact, they were only just to hand from the factory at the time of my call. There is an excellent range of flowerpots, and these being shown as they are in degrees from a very simple pattern to a fairly high-priced article, one would hardly be expected to experience any difficulty in finding something to suit both taste and pocket. We illustrate the "Buxton" shape flowerpot with decoration No. 4,544.



A. J. WILKINSON, LTD. [*Photo. by "The Pottery Gazette."*

Mr. John Walsh Walsh, Soho and Vesta Glass Works, Birmingham, is well maintaining his reputation as a premier English glass manufacturer by the samples displayed at his London showrooms, 4, Holborn-circus, E.C., controlled by Mr. H. Sharman. The development of the taste for best cut glass enables Mr. Walsh to show to perfection the beautiful crystal for which he receives the eulogy of the largest buyers in the trade. It is his intention to continue this policy, as he believes the development in high-class crystal, as against the cheaper quality, has been the mainstay of the boom which cut glass has been enjoying for a considerable time now. His "Koh-i-Noor" and diamond cut bowls and vases are now thoroughly well established, and all high class dealers should make a point of having them in their stocks, as their brilliancy lends feature to all goods surrounding them. The registered table decorations in the Sheraton designs in best silver plate and cut diamond class are being much sought after. Mr. John Walsh Walsh has possibly the largest collection

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C. J. PRATT (NATIONAL GLASS CO.),
1, CHARTERHOUSE STREET,
HOLBORN CIRCUS, LONDON.

in the trade of special shapes of moulds, out of which such articles as salts, sweets, or bon-bons are produced, which are quite distinct from, and form a pleasing contrast to, the ordinary round blown articles. Many new developments for this spring are now in evidence at the Holborn-circus showroom, and Mr. Wood also keeps a full line of samples at the works' showroom, for buyers who may be passing through Birmingham. We have previously referred to the glass pillars used by Mr. Walsh for supporting his glass shelves. These may be used by all glass dealers with marked advantage, and it may be repeated that Mr. Walsh supplies them, so that dealers desirous of making alterations in their fittings might bear this in mind.

Burgess & Leigh, Middleport Pottery, Burslem, have a better range of samples than ever at their City rooms, 44, Farringdon-street, E.C., in charge of Mr. Wm. H. Leigh. At the present moment they are very keen on toilet ware, and over a hundred new patterns are to be seen on the shelves, whilst there are at least three definitely new shapes in the "Grosvenor," "Savoy," and "Royal Oak," the two former of which we are permitted to reproduce in our illustration. But, in addition to these three new shapes, to which a wide choice of patterns is afforded, a number of the earlier shapes have been revived with entirely new decorations, presenting altogether a formidable showing. In fancies they have three definitely new lines: firstly, the "Delhi" (old blue scenic ware); secondly, a chintz pattern, having an old gold print as background, enamel coloured and finished off in gold; and thirdly, a stencilled wild rose enamelled design upon a shaded background. They have a splendid assortment of vases in old Chinese blue shown on a centre table, and which are certain to be highly appreciated from an artistic point of view. Already these are in good demand. Burgess & Leigh in their "Nankin Blue" have endeavoured not unsuccessfully to re-discover a tint which was produced par excellence by the Chinese potters in the fourteenth century (Ta Ming dynasty). The colour has a beautiful softness, and, to use their own words, "a clarity of definition not to be found in the modern flowing colours" which have been offered in its place. Certainly the reproduced colour is a captivating tone of blue, and will undoubtedly justify its introduction. In their "Chinese Peacock" decoration treated in this particular colour the artist has taken as the basis of his inspiration the old Oriental fable of the congress of the birds to elect a king. The design is, therefore, purely Oriental in character, and the shapes chosen are from the best Chinese models. Burgess & Leigh are evidently going in strongly for the vase trade, for which, until the present year, they have not really competed. In very short time they have succeeded in putting some capital designs and shapes on show. The chintz design already cited has been applied to these vases, and presents a good front. Another really beautiful design on show is an all-over mazarine blue ground with a profuse gold print. The combination of mazarine and gold is always charming, and this particular treatment is superlatively so. Although the gold print is unsparingly applied it is not overdone, and does not look overcrowded. The price for such a type of decoration is exceedingly reasonable. As this is the flowerpot season Burgess & Leigh have taken good care to have some eighty new patterns showing, and the "Countess" and "Grosvenor" shapes are amongst the latest introductions,



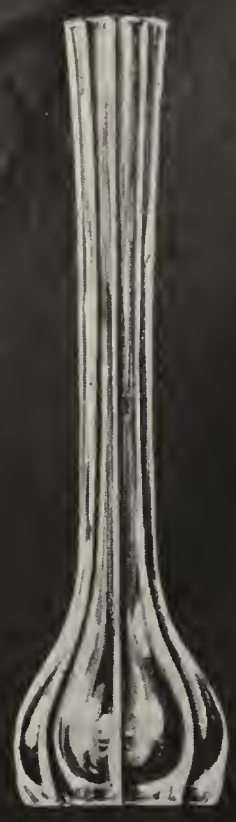
BURGESS & LEIGH. [*Photo. by "The Pottery Gazette."*

the former being a round-footed shape and the latter a bold square shape, both having neat embossments. My impression on leaving the room was that "Burleigh" ware has most certainly come to stay.

United States Glass Co., 55, Farringdon-street, E.C., have an even larger range of designs on show just now in pressed glass than usual, having included a good many special shapes, with octagon top, especially in fruit plates and round and shallow dishes, as well as a number of oblong pieces, particularly tomato and cress boats. In addition they have quite a number of new shapes in vases, two-handled and cylindrical. They have a distinctly new line in trinket sets, with square-shape candlesticks, and octagon topped powder and pomade boxes. They are offering the trade a new salad and flower bowl in the "Dutch Punty," whilst the "Sheraton" design, treated in bright gold, green and gold, silver, and scoured gold respectively, the latter giving a matt effect, occupies a principal place on the tables. Our illustration shows a footed fruit plate, a salad bowl, and a tankard jug, all in the "Sheraton" pattern. The firm is also showing quite a range of flower

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26/7 HATTON GARDEN, LONDON, E.C.

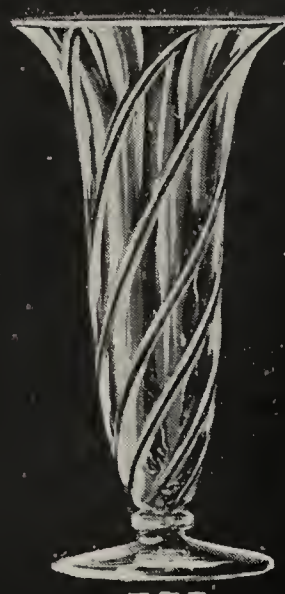

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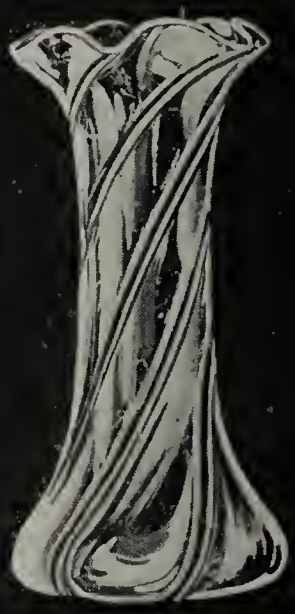

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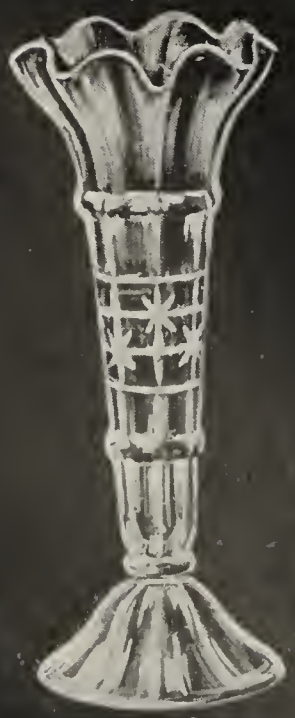

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NEW SEASONS PRODUCTIONS

bowls of varied patterns and shapes, mounted in brass and also in silver plate. The room also contains a nice collection of flower bowls treated in gold and rose and gold decorations, with or without metal feet. Altogether the United States Glass Co. have an excellent display of pressed glass wares. Mr. S. C. Akehurst has charge of the London office.

The Star China Co., Longton, are represented in London by Mr. F. W. Jukes, St. Andrew's House, 34, Holborn Viaduct, E.C. One of the principal features in this company's samples is the "Queen Alexandra Rose" pattern, which has been applied to practically all articles made by the firm. With the advent of "Rose Day" this should doubtless become popular. Amongst the other new patterns I noticed the "Primula," which is done in three colours—blue, heliotrope, and yellow. A sweet pea pattern is also being done in the same colourings. Other new patterns include a self-colour cornflower, a printed and enamelled fuchsia, the effect of this decoration being very realistic, and a naturally coloured heather design, which causes one to pause in passing through the room. Their No. 4,605 pattern struck me as being excellent value. This is of the "Primula" design, but treated in another form, the leaves being particularly true to nature. I was tempted to ask the price of this pattern, and discovered that it was extremely moderate. A beautiful range of after-dinner coffees and saucers is included in the general display, and there is also a nice range of dessert ware, principally with fish decorations, landscapes, Indian birds, and floral and conventional patterns. Some of the hand-painted bird subjects were, I thought, particularly fine, and have come in for the bestowal of great forethought and fine detail work on the part of the artist. This firm is well known for its high quality china, and the collection on view in Mr. Jukes' showroom is certainly well worth a visit.

Mr. William Ault, Faïence Manufacturer, Swadlincote.—On calling at this gentleman's showroom at Gamage-buildings, Holborn, E.C., I was privileged to inspect the various fine lines shown there of the famous "Ault Faïence." On the centre table of the room there is a show of "Poppy Ebonite" ware, which has a jet black ground, over which is applied a very delicate pink poppy, giving a striking though at the same time pleasing effect. This class of decoration is quite out of the ordinary, and, judiciously harmonised with its surroundings, should at once create a favourable impression. The "Goldstone" Aventurine still occupies a prominent place in the room, and is evidently enjoying a good run. It is now produced in a number of new shapes which lend themselves to this particular kind of decoration. For his self-coloured wares Mr. Ault is famous, and flowerpots, trinket sets, vases, jugs, &c., in quite a variety of lovely self-colours are available. Particularly noticeable is a grand rich red. Another colour is known as Liberty Blue; it is a charming shade in two blues most delicately toned, and has taken remarkably well. The newest shape in flowerpots is No. 860. This is made on very fine lines, and cannot fail to prove a great success. Trinket sets are made to match in shape and colour with all art toilet ware. This is quite a new feature in the trade, and Mr. Ault will be found to have been very successful in this direction. Also, there is a good assortment of pots and pedestals, all upon the very finest lines. Umbrella stands are done in various shapes. They are most artistic in design. I noticed on a separate bench a very fine display of art toilet ware in rich red, yellow, and old gold, liberty blue, olive greens, rose pink, slate blue, and practically every colour that can be produced in this particular kind of ware. This should be interesting to every buyer of art toilet ware. The toilet sets are non-porous, and can claim to have every advantage possible from a practical side as well as the very finest artistic effect. The newest shape in toilet ware is the "Stewart," having a wide, open-mouthed, well-balanced ewer. A special section of the room is devoted to a display of leadless glaze wares, and it should be mentioned that the new jet ground decorations are all leadless. Mr. Ault has, of course, taken quite a number of prizes and diplomas at the various exhibitions. Some of these are very recent, and a noticeable one is the Grand Prix (Section A, Arts and Crafts), at the Festival of the Empire Exhibition, held at the Crystal Palace in 1911.



THE UNITED STATES GLASS CO. [*Photo. by "The Pottery Gazette."*

The Blyth Porcelain Co., Ltd., Longton.—In his showroom at 117, Holborn, E.C., Mr. R. Hartland has a very nice range of patterns in china tea sets and breakfast sets for home and colonial markets made by this firm, who are responsible for turning out a very nice quality of china, and pride themselves upon using only the finest materials in its preparation, and in order to get body, glaze and colours which are above reproach. In making first of all a very general inspection, I was very pleased

with the range of samples on show in underglaze blue, especially in bands and panels. This is a line in which they evidently take an important stand, and I must say that the samples I saw were not only very good, but extremely moderate in price. I am allowed to illustrate a few pieces which I myself selected for the purpose. The "Bell" shape cup and saucer No. 5,845, which is of the mazarine blue series previously referred to, has also enamelled flowers, and is traced in gold. The "Trent" shape, No. 5,797, has an underglaze blue print, with enamelled roses in panels, gold-edged and traced. (Suite ware is also supplied in this particular pattern.) The "Elite" shape, No. 5,057 pattern, has a wide mazarine blue band partly down the cup and saucer, with a printed brown border below, the band being edged off with gold. The "Diamond" brown border, in combination with the gold, gives a rich appearance generally to the pattern. The "Scotch" shape with No. 5,586 pattern shows principally a gold rose festoon, applied to a background of brown and green, with gold edge and line above and gold line below, a very catchy style of decoration. The "Elite" shape, with pattern No. 5,664, of which we illustrate a teapot, sugar and cream, teacup and saucer and coffee cup and saucer, has a fairly wide dark blue band with floral panels and rich gold tracing. The "Tall Flo" shape, which we also illustrate, is fluted, and with pattern No. 5,792, consisting of mazarine blue panels traced in gold and single enamelled roses entwining, should become prominent. Altogether Mr. Hartland has a very attractive display, and in tea ware he is certainly placed well in the fighting line.



BLYTH PORCELAIN CO., LTD. [*Photo. by "The Pottery Gazette."*

Wood & Sons, Ltd., Trent and New Wharf Potteries, Burslem, are now represented in the City by Mr. H. Brittain, at 22, Ely-place, E.C., where some first-class patterns of dinner and toilet ware, for which this concern has long been reputed, can be seen to advantage. The quality of the body is extremely good, and the designs are well chosen, whilst at the same time the prices are competitive. Mr. Brittain has established a very nice room at the address mentioned, and can look forward to a successful season. Some new lines are being shown in dinner ware, one of the latest being a Japanese bird decoration, printed under glaze and enamelled, having also a green colour edge with handles traced to match. It is quite appealing, and one would prophesy that it will have a good run. Another important new design is a blue and red Derby border with a very neat red printed border below. This design is done throughout in fancies, cress dishes, muffins, cheeses, flowerpots, jugs, &c. Wood & Sons are making a speciality just now of blue band and hair brown border decoration, which comes out exceedingly well. The "Conley" toilet ware is of octagonal form, and treated with a bird design with green traced handles — a distinctly imposing type of pattern—constitutes a really good sample. A bold fruit design has been resuscitated, and has a dark green print round the neck and down the handles, giving it a finishing touch. An all-over primrose print, known as the "Prunus," is being shown in very quaint shapes of vases, and occupies a principal place amongst the samples. I understand it is going well. It looks extremely well in bulb bowls, of which some good samples are showing. There is, however, practically a whole suite of this decoration from which to select. A number of the old Chinese shape vases done true to the original colours are to be seen. A new decoration, introduced by Mr. Fred Rhead, and styled "Orien," consists of a turquoise ground with art nouveau treatment in bold relief, and traced in gold. One

of the firm's principal lines is, of course, badged and hotel wares, in which department they present a keen competition.

J. Wuidart & Co., Ltd., 26, 27 and 28, Bartlett's-buildings, Holborn-circus, E.C.—Besides the usual lines of table glass, tumblers, &c., which are always to be seen to great advantage at these showrooms, I found on paying the firm a visit recently that they are making a speciality just now of heavy cut crystal glass in vases, bowls, trinket sets, dessert sets, and even toilet sets. There is evidently a real and unmistakable demand for these heavily cut designs, for these are principally displayed at the present time in the room. Dessert sets and toilet sets are comparatively new in glassware. They look, however, extremely well, and I am, by the courteous permission of the firm, able to illustrate one of the heavily cut toilet designs now showing. Five pieces are shown in the photograph, viz., ewer and basin, soap, brush and sponge. I am given to understand that the demand is so keen that for the moment the demand exceeds the supply, but this, of course, is a circumstance which will soon be changed. I noticed a very good line in salad, fruit and flower bowls, well cut, part of the pattern, however, being left unpolished, and giving a matt effect. There are some interesting lines in decorated glass services on show, including the "Beta," "Parisian," and "Shell," three entirely new patterns in cut and brilliant etched, for which styles there is now considerable popularity. I ought to mention that the glass toilet ware looks particularly attractive finished with a burnished gold edge, of which samples are to be seen, and I understand that this is perhaps its most popular form. As for the showroom, it is most excellently arranged, and contains much to make one wish to remain.



JULES WUIDART & CO., LTD. [*Photo. by "The Pottery Gazette."*

The Anglo-Belge Glass Association, Ltd., 26-7, Hatton-garden, E.C., are well known for assorted cases of tubes, and this season they are running four distinct lines in tubes, viz., simple optics, cut, embossed and pantographed. The simple optics are of new shapes, and are supplied both in crystal and green. Each shape has a different optic, which has been well chosen to it. The assortment of cut tubes on show in their well set out showroom is entirely new for the present season, and comprises four quite new lines, both as regards cutting and form. The embossed assortment includes a beautiful range of new and unique shapes, the embossment taking principally the form of a flower decoration on optic glass of fine, brilliant quality. It is not the first time we have called attention to the pantograph designs, but this year they have some pleasing new designs on distinctly new shapes. Buyers wishing to order an assorted crate of the optic tubes should call for the "Lineo" assortment, as shown in the upper row of the illustration, whilst the cut tubes assortment in the lower row is known as the "Scott." All the tubes mentioned are held in stock in assorted cases, but there is also on hand a large loose stock, so that special quantities can easily be supplied. It is a sore point with many of the smaller china and glass dealers that the bazaars are capturing a good deal of their



ANGLO-BELGE GLASS ASSOCIATION, LTD.

cheaper trade, and in this connection may I be allowed to mention that the Anglo-Belge Glass Association do not supply the bazaars, so that their customers need have no hesitation in handling their goods because of any danger of clashing with the universal cheap bazaar.

Mr. Chas. J. Pratt, 1, Charterhouse-street, E.C., is to be congratulated on the arrangement of his new showroom. In the first place, it is situated in a most convenient quarter and has a splendid stand at the corner of Charterhouse-street and Ely-place. It has only been occupied by him this year, but is already excellently fitted up, and the fittings are so arranged that one can see at a glance right across the room. An important feature is that the showroom is on the ground floor, a circumstance that cannot fail to be appreciated. The room is exceedingly well lighted, so that the dark days will have no terror for Mr. Pratt, and the National Glass Co., for which company he has the sole agency for the United Kingdom and the colonies. Pressed, blown, and cut glass wares of all kinds are displayed in the new showroom, and the productions of the several extensive factories worked by the National Glass Co. cover a very wide scope. The Chippendale "Krystol," made by the Jefferson Glass Co., is still one of the principal lines handled by this concern. These goods are so well known as to need no description. This factory still continues to produce beautifully artistic designs, and the high grade of colour brilliancy is well maintained throughout. A number of new articles are now being added to the already extensive range. These will shortly be on show, and will include trinket sets, cheese stands, and a variety of footed dishes. In addition to the above, Mr. Pratt represents other factories producing goods of special interest to the English and colonial markets, the McKee Glass Works, famous for their "Prescut" designs, being one of them. This factory has just sent along two entirely new patterns, "Startec" and "Plytec," both of which are very bright and effective, and the price, moreover, quite moderate. The New Martinsville Glass Co. is another factory represented by Mr. Pratt, and their 720 design is quite excellent from every point of view. The design is illustrated here by a few pieces, the high polish and brilliancy of which can be judged by the difficulty we have had in photographing them. In passing, I should mention that a new range of goods in iridescent effects is just now on show. The high-class colour effects are well maintained, and many of the new shapes are a distinct advance on anything previously produced. The sale of these goods is still large, especially for export. In addition to general table ware, an extensive range is showing of stationers' sundries, such as glass inks, &c., also lighting goods for gas and electric. A visit to the new showroom will well repay buyers requiring high grade pressed glass wares.



THE NATIONAL GLASS CO. (MR. C. J. PRATT). [*Photo. by "The Pottery Gazette."*

Empire Notes.

Mr. Sniders, of S. Schneiders & Son, exporters, of London, S. Africa, and Australia, who has recently returned to England from the latter continent, paid a visit to the Potteries during the last week of March.

Mr. John Shorter, of 193, Clarence-street, Sydney, has favoured us with a copy of his handsome calendar for 1913. It is illustrated with coloured reproductions of a fine salt glazed Lambeth Doulton jardinière and of a magnificent "tiger skin" flambé vase.

Pottery Manufacture in Bombay.—More than a year ago it was decided by the Government of Bombay that in order to encourage the development of pottery and industry, results of experiments carried out in the pottery department of the Bombay School of Art should be made available to the public free of charge. The Superintendent was authorised to give free advice to private firms and individuals. This concession has now been carried further. It is considered desirable that the services of the Superintendent should be made available outside of Bombay to Native States and private firms or individuals interested in the industry. The Principal of the School has accordingly been authorised to permit the Superintendent to visit places outside of Bombay for examination of clay

beds, &c., and to give advice generally. It is hoped that the arrangement will be freely taken advantage of.

Trade Openings in Canada.—The following commercial inquiries have been received at the offices of the High Commissioner for Canada, 17, Victoria-street, London, S.W., whence further information regarding them may be obtained on mentioning THE POTTERY GAZETTE :—A firm of general importers in Montreal, who specialise in building trade requirements, wish to secure the representation of manufacturers of Scotch and English bricks and tiles.——An Ottawa firm desire to get into touch with United Kingdom manufacturers of glazed sewer tiles, firebricks, and fireclay goods.——Tenders for the supply of vitrified tile sewer pipes and junctions will be received, up to noon on April 15, by the Secretary, Town Council, North Battleford, Saskatchewan, from whom plans, specifications and forms of tender may be obtained, as well as from the engineers, Chipman & Power, Mail-building, Toronto.——Tenders will be received by the Engineer, City Hall, Montreal, for the construction of the first section of the underground conduit system along St. Catherine-street. The main ducts on each side of the street will be composed of earthenware conduits, 3½ in. square, in groups of 15 and 20 sections, with groups of three sections each of 3½ in. fibre conduit for service wires. No date to which tenders will be received is mentioned. Application for further particulars should be made to the Engineer, City Hall, Montreal.

Obituary.

MR. W. THOMSON, Aged 76.

WE deeply regret to record the death, on March 10, of Mr. William Thomson, one of the oldest and most valued members of THE POTTERY GAZETTE literary staff. We believe that we are correct in stating that articles have appeared in every number of THE POTTERY GAZETTE since the first one published in October, 1878, the last item he furnished being the London Stores notice in the March issue. He thus practically died in harness, as he would have wished. For some time the infirmities naturally associated with his advancing years, especially his deafness, had grown upon him ; and much had been done to lighten his labours. Unfortunately, he contracted a severe chill during a visit paid to the Potteries in the middle of February, and passed away at his home at Herne Hill, London, S.E., after having undergone an operation in March.



MR. W. THOMSON.

Mr. Thomson's parents died when he was quite young, and he was educated at Giggleswick School, Settle, Yorks., by his uncle, the late Mr. James Thomson, J.P., of Poplar House, Wray, Lancashire (who was a county magistrate).

In the early years of the publication of THE POTTERY GAZETTE, Mr. Thomson ranked rather as a contributor to our paper than as a member of the staff. Prior to 1880, he was London manager for Mr. William Ramsey, whose glass warehouses were in Farringdon-street, E.C., and who was a relative of his. In 1881 he had showrooms at 16, Thavies Inn, Holborn, E.C., representing Mr. Henry Greener, Wear Flint Glass Works, Sunderland, and also Bradbury & Sons, china manufacturers, Longton. On turning to the volume of THE POTTERY GAZETTE for 1883, we see that his showrooms had been removed to 5, Farringdon-road, E.C., and that Mr. Thomson was then representing Mr. H. Greener, Meigh & Forester, Longton ; Owen, Raby & Co., Longport ; Gibson, Sudlow & Co., Burslem ; and Hard & Austin, Clerkenwell, E.C. Mr. A. B. Heritage was at one time associated with Mr. Thomson in the management of these agencies, and is still representing Greener & Co., of Sunderland, at 12, Thavies Inn. Mr. Thomson had always a taste for writing. "He was never so happy as when he had a pen in his hand," writes one who knew him well. He gradually drifted more and more into journalistic work, being employed by several papers, but latterly finding his most congenial medium in THE POTTERY GAZETTE on account of his early association with the trade, in which he took the keenest interest right to the last.

Mr. Thomson's wife predeceased him by many years, but was held by him in very affectionate remembrance. He is survived by his three sons, one of whom, Mr. R. H. Thomson, is in business as a china and glass dealer at Walthamstow, E. The interment took place on March 12 at Tooting Cemetery, and there were present, in addition to the relatives, Mr. A. B. Heritage (Greener & Co.), Mr. J. G. W. James (Secretary of the Pottery and Glass Trades' Benevolent Institution), and Mr. E. Greenwood (POTTERY GAZETTE). We have received a large number of messages of sympathy both by letter and telephone from prominent persons in the trade, among whom we may mention Mr. Chas. Green, Mr. John Porter, and Mr. A. J. Dale. We have also received a resolution of sympathy from the Board of Management of the Pottery and Glass Trades' Benevolent Institution. Mr. Thomson was for many years an enthusiastic helper of the Institution, and only retired from the Board last year. An excellent likeness of our late colleague appeared in the foreground of the illustration of the Festival Dinner of the Institution on p. 1313 of THE POTTERY GAZETTE for December, 1912. We reproduce here the latest available photograph, which is, unfortunately, not a very recent one.

So passes from our ken one whose long trade experience, painstaking industry, unassuming modesty, and unvarying kindliness and geniality cannot have failed to win the respect and affection of all who knew him.

MR. E. MORGAN JONES.

WE much regret to record the death on Tuesday, Feb. 25, of Mr. E. Morgan Jones, the London manager for Thos. Forester & Sons, Ltd., Longton. The deceased gentleman was well known and highly respected in the trade, and his very sudden death came quite as a shock to all. We believe the deceased originally served his apprenticeship with the late firm of Silber & Fleming, and for many years prior to acccpting Forester & Sons' representation in London, we understand he travelled the Continent with Oriental goods. For seven years prior to his death the deceased gave his entire attention to Forester & Sons' interests. He was a most genial man, liked and thoroughly respected throughout the trade, and particularly by the clients of the firm who were honoured by his representation. The late Mr. Morgan Jones was a good age, though he carried it well. We



Photo. by Mora, Brighton.

MR. MORGAN JONES.

reproduce a photograph, which unfortunately is rather an old one, but is very much like him, even during his later years. The funeral took place at Walthamstow on Feb. 28.

MR. R. PIRIE COPELAND, J.P., D.L.

IT is with deep regret that we record the death on Monday, March 3, of Mr. Richard Pirie Copeland, J.P., D.L., of Kibblestone Hall, Stone, Staffs., head of the famous firm of W. T. Copeland & Sons, Stoke-on-Trent. The deceased gentleman, who was in his seventy-second year, had been ailing for some eight months prior to his death, but towards the end of February



MR. R. P. COPELAND, J.P., D.L.

he became much weaker, and expired between 1 and 2 o'clock on the date already mentioned, from exhaustion.

The late Mr. R. P. Copeland was born at Leyton, Essex, in the year 1841, and received his education abroad. In 1867, together with his three brothers, he was taken into the firm as a partner. Alderman William Taylor Copeland, of whom he was the fourth and youngest son, died in the following year, and eventually the late Mr. R. P. Copeland became the sole proprietor of the business, and assisted by his sons sought always to uphold the traditions of the old-established and distinguished business to which it was his lot to succeed.

The deceased was well known in public life, and highly respected throughout the county. He was appointed a county magistrate in 1876, and occupied the chair of the Stone Bench of magistrates for a long time. He was also at one time a member of the old Stoke Town Council and succeeded the first holder of the office, Alderman William Keary, as Mayor. In 1903 he became High Sheriff of the county. At one time the County Council also claimed his attention, and altogether he did his best to fulfil his civic obligations. Latterly, however, the deceased led a more retired life, but up to within twelve months of his death regularly visited the factory in High-street.

At 70 years of age the late Mr. Copeland was well and strong, and it was only during the last eight or nine months that his health took a downward turn which quickly laid him aside. The interment took place at Oulton Cemetery on Thursday, March 6, and was deeply impressive. The employees of the factory were represented by a goodly number of foremen and officials, and there were many beautiful floral tributes.

The deceased gentleman is succeeded in the business by his sons Mr. Ronald J. Copeland and Mr. Gresham Copeland, who were taken into partnership some time ago.

MR. JAMES B. CRAIG.

ON March 16 Mr. James B. Craig, china and glass merchant, passed away at his residence, St. Olaf, Nolt Loan-road, Arbroath, at the age of 57 years. The cause of his much regretted decease was a bronchial attack, followed by internal complications. Mr. Craig was the proprietor of an old-established business at 37, Millgate, Arbroath, which was founded by his father in 1837.

Mr. Craig was connected with the business for forty years, first as an assistant to his mother and later as the proprietor, proving very successful. He took a keen interest in the affairs of the town, and for fifteen years previous to his death he was secretary of the Shopkeepers' and Half-Holiday Association. He also took an active share in the work of the Health Congress, and was at one time secretary of the Arbroath Swimming Club. Mr. Craig's favourite recreation was golf, and he was a member of the Arbroath Golf Club. He is survived by a widow, a son, and a daughter, with whom much sympathy is expressed in their bereavement. The interment took place on March 19 in the Western Cemetery, Arbroath, when a numerous company attended to do honour to his memory, his personal qualities and public services having won him many friends.



Photo. by Gibson, Arbroath.

MR. J. B. CRAIG.

The death has taken place of Major Thos. Sumnal, V.D., manager of Mr. J. C. Edward's tile works at Ruabon, and formerly with Maw & Co., tile manufacturers, Broseley. Deceased served in the Shropshire and Royal Welsh Fusilier Volunteers for 40 years, and retired last year with the rank of Major, and with the Volunteer decoration and the long service medal. For 15 years he served on the Wrexham Board of Guardians and Rural District Council.

OUR PRIZE COMPETITION.

IN accordance with our promise, we announce in this issue the result of our latest prize competition. We offered a first prize of Five Guineas and a second prize of Three Guineas for the best appreciations, not exceeding 500 words in length, of any goods advertised in the February or March issues of THE POTTERY GAZETTE. The competition was open to subscribers to THE POTTERY GAZETTE who dealt in the goods described, but had no interest in or connection with the firm producing them. The response has been satisfactory in so far as it shows how intelligently many dealers study the qualities of the wares which they handle. The weak point of some of the contributions is that they do not perhaps dilate sufficiently upon the advantages of the goods from the customers' point of view; while some are inclined to discuss the advertisements themselves rather than the goods advertised. Still, on the whole, this competition has been a decided success; and we hope that the appreciations printed below will be of use to retailers who wish to ensure that their purchases shall include the really popular lines.

FIRST PRIZE (£5 5s.) awarded to Mr. WM. D. REDINGTON, 120, Barndale-road, Mossley Hill, Liverpool, for his appreciation of RUSKIN POTTERY.

From West Smethwick—a busy little suburb of Birmingham—comes the beautiful ware known all over the world as "Ruskin Pottery." The inventor of this classic product, Mr. Howson Taylor, is one of a small but devoted group of English potters who have left their mark upon the early years of the twentieth century by freeing themselves from the restraint of the eighteenth and nineteenth centuries, putting aside old ideals, and turning their thoughts in the direction of coloured, mottled, and lustre glazes. The source of Mr. Taylor's inspiration seems to have been the old masterpieces of the potter's art from China, Persia, and Japan—the wonderful Soufflés, Lustres, and Flambés of the East—rich in antiquity, priceless in value, the envy of the potter, and the admiration of the world.

Whilst Ruskin pottery is not an imitation of the treasures of by-gone centuries, its perfect symmetry of form, lustrous colours, and distinctive splashed and variegated glazes are all reminiscent of past glories. The technique of the potting and the smooth, even flow of the glaze are a triumph of ceramic art, and though but an earthenware body, many of the pieces are light and delicate as fine egg-shell porcelain, delightful alike to hand and eye.

The splendour of this ware, however, lies in its exquisite colour schemes—colours new and old, single and mingled—schemes of wizardry graduating in magic and endless variety. The single colour or Soufflé glazes include turquoise and all intervening shades to dark blues; the delicate and varied tints of celadon from blue green to green grey, gradations in purple and mauve, and many others. The beautiful mottled effects produced on some of the vases and bowls, though unlimited in their variety and always subordinate to the colour note, blend and harmonise in a manner that is natural and unaffected.

In the Lustre glazes we have a production that brought fame and popularity to the designer. The protean effects of the colourings are magnificent, and it is impossible to exaggerate the sublime beauty of many of the pieces. Here the cunning of the potter and the skill of the artist leave no room for satiety or boredom; the surface glowing like beaten metal and blazing with iridescent light. The orange (or flame, as it is sometimes called), lemon-yellow, pink, and mauve, are but a few of the many colourings which, when combined with the lustrous glaze and transmuted by fire, produce effects as unique as they are delightful, pleasing to the eye and agreeable to the touch. Perhaps the most beautiful colouring is the one designated "Kingfisher Blue." Here the artist seems to have caught the distinctive glory of an alluring sunset, and so varied are the wonders of furnace transmutation, the effect produced is a sunset shot with burnished gold, flashing and sparkling through a frame of crystalline blue, tinged here and there with shafts of golden light and gorgeous purple. Such, in a few words, is the Ruskin Pottery.

SECOND PRIZE (£3 3s.) awarded to Mr. J. G. STEWARDSON, 221, Westgate-road, Newcastle-on-Tyne, for his appreciation of ROYAL VIENNA WARE (Alexandra Porcelain Works).

Perhaps the best test of the "merits" of any firm's productions is the pleasure and avidity with which the dealer regards the re-dressing of his windows with their goods; and those who have once made a window display of the productions of the Alexandra Porcelain Works are generally delightedly keen to do so again. And for this reason, that the dealer who makes a display of this firm's exquisite wares gives caste to his business, enhances his reputation for artistic selection, and undoubtedly increases his returns.

Many productions in pottery and glass may have the merit of being distinctive, artistically designed, beautifully decorated, and excellently finished; but unless they have, in conjunction with these, the merits of durability, freedom from crazing, of being right in price, appealing to the average taste, and supplying a real need—they have little or no "commercial merit"; and, therefore, no vital interest to the dealer. To combine all these merits in their productions may be difficult for one firm to achieve, yet the Alexandra Porcelain Works have proved it possible. They produce both useful and ornamental goods, each possessing artistic and commercial merit; but it is in their unique and distinctive ornamental pottery that they stand pre-eminent.

A visit to their showrooms is an artistic and commercial education. The inherent beauty of their productions is undeniable. Upon their beautiful figure studies it is impossible to bestow too much praise. The modelling is perfect, the figures instinct with life and intelligent suggestion, the stamp of the real artist manifest in every limb and feature. Take one specific piece, "The Sea Chariot." A huge shell of exquisite form, resting upon the backs of two sea-horses, forms the chariot. At the back of the shell stands the sea-maiden, reins in hand, sentient with life, her keen gaze fixed on the more restive horse, as they go dashing through the churning wave. Every detail is perfect, even to the tiny foam flecks, which lie inside the chariot. It is a thing of beauty—a pleasure to the producer, the retailer, and final purchaser. The piece is typical, and such may be said of all their figure studies. Every subject, be it that of "The Hunter," with keen vision and muscular arm, or the timid "Mermaid" with streaming hair, rising to the surface to pull the water lily; every subject (and the variety is prolific) is equally artistic in conception.

The colouring and decoration are carried out with exquisite taste and in perfect harmony with the subject treated, while every detail is carefully watched and each figure as carefully finished at the back as in the front. In fact, it is this carefulness of detail, combined with artistic conception, which gives the hall-mark of merit and undoubted superiority to this firm's productions. Incomparable in design and finish, moderate in price, ensuring a ready sale, they possess the greatest qualifications the dealer can desire.

We print below a few extracts from some of the other appreciations.

Copeland's Spode.—"Spode's 'Tower Decoration' Zaffres Blue" the advertisement reads. It would be interesting to know how many pieces have been sold. The goods must sell if they are well displayed. The Dutch shape jugs so beautifully potted in non-crazing earthenware, in every useful size; the printing done in Copeland's style; the uncommon and rich tone of the "Zaffres Blue," and the quaint old "Towers" pattern. Then there is the variety of articles—vases, teapots, inkstands, quaint shaped dishes, wall plaques, dinner sets, tea sets, toilet sets, dessert sets, &c., every single piece a joy for ever, because a thing of beauty. It is a pattern that we thought it impossible to beat until "Spode's Italian" was reintroduced, and this is best described in the words of the advertisement—"The Perfect Blue Print." There is little wonder that customers buy it, for the engraving is a work of art worthy of such a firm as Copeland's, and the colour of "The Perfect Blue Print" is in the delightful old style. There is always a satisfaction in selling Copeland's productions, and a satisfaction that is always the same, whether selling a 6d. "Tower" jug or a £50 china service.

Royal Crown Derby Porcelain.—The trader, all the world over, whatever the goods he is offering for sale or barter, must surely always derive more pleasure and satisfaction in dealing with goods of fine quality than with medium or cheap brands. If this axiom applies to such articles as soap, boots, groceries, and similar every-day commodities, how much more closely to the artistic and individualistic stock with which our showrooms are decorated and adorned. For this reason, when I noticed the announcement of your interesting competition my thoughts immediately turned to the products of the Royal Crown Derby Factory. Eliminating the world-famous 2,451 design and kindred Japans, it might be said that the sale (especially in the provinces) is too limited to be of any satisfaction, but I maintain that the turning over in a month of a few dozen pieces of Derby and kindred fine ceramics such as Worcester and Coalport is the spice that adds zest and pleasure to the bread-and-butter sale. It is as the bouquet of the wine and the aroma of the choice cigar. The distinctive form, the carefully chosen, though sometimes daring, blend of colour, and the perfect finish, makes the transaction, either in buying or selling, one of peculiar charm and interest. The Japan decorations are too well known to require comment, but it is surprising how many of the educated public, even to-day, believe that Derby decorations are confined to these. Here is an opportunity for the retailer to enlighten and instruct his clients. The vitreous or crown body is also of magnificent quality, though by some considered rather too grey in colour.

The Booth Style.—"Silicon China" is an apt way of describing the unique products of English earthenware emanating from the works of Booths, Ltd., of Tunstall, who undoubtedly enjoy the warm favour of a discriminating public. This popularity has been achieved solely by the merit of their goods, which are noted for their all round excellence, their good potting, durable body, fine white glaze, brilliance of colouring, and the artistry shown in shape and design. Whatever the article or pattern, the simple one-colour prints or the more elaborate enamels, it is all the same, the stamp of quality and good workmanship is over all. For example, what can be in better taste than the "Antique Pheasant" pattern? Or what can excel their reproductions of those fine old Chinese designs "Peony" "Plum Blossom," "Plum Willow," &c.; all of which are beautifully printed in a most pleasing colour described as "Antique Blue"? These are excellent stock lines for any dealer. In their "Real Old Willow" pattern we have a reproduction embracing the most novel treatment or adaptation of "Willow" since its production at Coalport in 1780; yet it is only an underglaze blue print, but a blue of surpassing delicacy, soft and pleasing. In the trade the fact is well known that the great charm of the "Willow Pattern" lies in its colour (proved by its unpopularity in any other colour), but the peculiar shade employed by Booths is an achievement of purity and refinement of the highest order. The print itself is perfect, as clear and distinct as a fine example of a "Rogers" or "Mason" engraving. Much more might be said in appreciation of this ever popular pattern; suffice it to say that it is a typical example of the "Booth Style," and is carried out on all services, teapots, jugs, &c. For an attractive window display show "Real Old Willow." Equally good in comparison with the lines already mentioned are the coloured enamels also produced by this most enterprising firm. The early Victorian design named "Dolly Varden" is a border pattern worked in various enamels, original in colouring, and bearing the impress of individuality. Again, in "The Pompadour," "The Parrot," and "'The Lowestoft' 'border and sprays,'" —all excellent reproductions of old English designs—we trace the same peculiar faculty for expression in original colourings, clear outline, and vigorous treatment. This characteristic feature of skilful, ingenious, and almost daring colour schemes pervades all Booths' productions, and contributes very largely to their success.

Hughes' China.—Messrs. Hughes' goods have stood the test of thirty years, and an increasing output year by year testifies to the sound judgment of merchants and their appreciation of quality at moderate prices. Next to quality are design and decoration, and here E. Hughes & Co., Ltd., are strong. Anything more dainty and attractive than their tea sets can hardly be conceived. The decoration is quiet and tasteful, and the shapes—some of them old patterns revived, others new creations—have the charm which ladies appreciate. "I do love to see pretty china!" is an exclamation familiar to all dealers. This love should be fostered by attention to display, and a careful selection of patterns, neat in design and artistic in decoration. In stock lines E. Hughes & Co., Ltd., are very good. Silver and Carlton teas, with best gold, at moderate prices, should command an increasing sale, and china merchants would have great satisfaction in selling them, and customers would eventually consider them well worth the difference in price.

Burleigh Ware.—The firm has been in business for over half a century, and an increasing trade at home and in the colonies bears testimony to the excellency of the goods they manufacture. In dinner sets they have a wonderful variety and at prices to suit all classes—good prints up to the elaborate and beautiful hand-painted sets fit for the table of a king. Toilet sets they also make a speciality of. The Portland is a distinctive pattern, and may be had in many different decorations. Their C.C. ware is of an exceptionally good quality, and comprises all the requisites for a fully-equipped kitchen.

Glass and Glassware to the weight of 94,565·9 metric tons were exported from Austria-Hungary last year. This total comprised hollow glass, 73,468·3 m. tons; beads, buttons, &c. (the only decrease), 6,884·7 m. tons; and bracelets, necklaces, works of glass beads, &c., 1,978·8 m. tons.



THE BENEVOLENT INSTITUTION.

THE portraits appearing on this page are those of two well-known men in the trade, upon whose shoulders will fall, during the current year, the chief responsibility for the effective administration of the Pottery and Glass Trades Benevolent Institution. Mr. Charles E. Green and Mr. Congreve Jackson were unanimously elected by the members of the Board of Management present at the February meeting to fill the offices of chairman and vice-chairman respectively, and the Institution is to be congratulated upon the selections made.



[*Photo. by Bassano, Ltd.*
MR. CHARLES E. GREEN.

MR. CHARLES E. GREEN is a member of the firm of Green Bros., Hatton-garden, and is also chairman of Booths, Ltd., Tunstall. From almost the hour that he made his entry into business he has been interested in the Institution, following in the footsteps of his father — who, as the trade generally knows, was one of its founders, and it was he who in those far-off days gave the Institution a home beneath the roof of his own office in Ely-place: history was therefore repeating itself when, in 1909, the subject of this notice came to the assistance of the Institution, and in the hour of need provided office accommodation, free of charge, in Hatton-garden. To Mr. Charles Green belongs the credit of the inception of the idea of holding an annual Festival Dinner, which has now become a trade gathering of great importance, with far-reaching effects. To his determined energy in a large measure was due the alteration and revisions of the rules, whilst his never failing advocacy of a 5s. subscription for employees is well remembered by those who at the time differed from him.

Mr. Charles Green has always been an ingenious man, and as far back as 1886 he patented his Arctic lamp, which from small beginnings has grown into worldwide fame, and is now in demand in every quarter of the civilised globe; he is a man of great business aptitude, a capable financier, full of ideas, combined with an energy and determination for carrying them into effect, and although a busy man he finds time to interest himself in municipal affairs; he is an alderman of the Borough of Holborn, and a recognised expert on municipal finance. What little leisure he allows himself is devoted to golfing.

MR. CONGREVE JACKSON has been connected with Thomas Webb & Sons, the famous Stourbridge glass firm, since the early eighties, and after representing them in the provinces and London was in 1900 appointed sole managing director, and to his determination must be credited the successful result that followed the fight the firm had with the Glass Makers' Society. It was a big task, and a pretty costly one too, to cross swords with a trades union and to reject their rules and replace their men by non-union workmen, but Mr. Jackson was not to be daunted, and to-day he employs a body of non-union men, who have been gradually trained up to the highest efficiency —a testimony indeed to his grit and self-reliance. As the son of a clergyman (for his father, the late Rev. W. H. Jackson, was rector of Thorpard) it is not surprising to find the subject of this notice interested in literary work, which in his case consists of many pamphlets on Tariff Reform: one of these has had a circulation of over 100,000. He is a prominent member of the English Church Union, whilst his energies and activities are never lacking in anything that tends to secure the success and usefulness of the Pottery and Glass Trades Benevolent Institution, to which he is both a regular and generous donor.

Our Potteries correspondent writes:—

The Potteries Committee of the Pottery and Glass Trades' Benevolent Institution recently met at Stoke and appointed Mr. Robert Shenton, of Wedgwood & Co., Ltd., as chairman of the committee for the year, and Mr. Wm. Rhodes, of Keeling & Co., Ltd., Burslem, as vice-chairman. The committee consists of the following gentlemen:—J. G. Aynsley, J.P. (John Aynsley & Sons), Longton; Robert Audley (the New Hall Pottery Co.), Hanley; A. H. Best (James Best & Co.), Longport; D. F. W. Bishop (Bishop & Stonier), Hanley; C. H. Bowers (Booths, Ltd.), Tunstall; W. H. Brain (E. Brain & Co.), Fenton; Allan Doulton (Doulton & Co., Ltd.), Burslem; H. Davis (Thomas Morris, Ltd.), Longton; T. W. Gimson, Fenton; J. S. Goddard (G. L. Ashworth & Bros.), Hanley; C. S. Jones (George Jones & Sons, Ltd.), Stoke; A. E. Jones (Palissy Pottery), Longton; A. G. Harley Jones, Fenton; S. Johnson, Burslem; Edmund Leigh, J.P. (Burgess & Leigh), Burslem; Mr. J. F. Maddock (J. Maddock & Sons, Ltd), Burslem; Harold Plant (R. H. & S. L. Plant), Longton; W. E. Robinson, Burslem; C. W. Shirley (Mersey Weaver Co.), Longport; A. Winkle (F. Winkle & Co., Ltd.), Stoke; F. Williamson (H. M. Williamson & Sons), Longton; J. A. Wood (Wood, Mitchell & Co., Ltd.), Hanley. The hon. secretary is Mr. Warwick Savage, Burslem.



[*Photo by H. J. Whitlock & Son, Ltd., Birmingham.*
MR. CONGREVE JACKSON.

Porcelain Table Ware to the weight of 33,528·9 metric tons was exported from Germany last year. The trade is making steady progress.

POTTERY AND GLASS AT THE LEIPZIG FAIR.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

THE Leipzig fairs afford a most interesting example of an ancient institution adapted very efficiently to modern uses. The great fairs of the middle ages played a very necessary part in bringing together from widely separated districts buyers and sellers, who would otherwise, owing to the difficulty of transport, and the dangers of travelling, have been totally unable to do business with one another. The fairs are supposed to have originated in the gathering together of traders to supply the requirements of the crowds of devout pilgrims who were wont to repair at fixed times to certain holy places. Indeed the name "Messe," by which they were known in Germany, signifies "Mass." No doubt many of the pilgrims were not unwilling to turn their pious journeyings to worldly profit; and so the commercial importance of these assemblies developed rapidly, and ultimately usurped the place of the originally religious functions. Heavy tolls were levied by kings and princes for the facilities they afforded to the merchants, and in return valuable privileges in the form of monopolies and safeguards were granted, while the popular approval was secured by free indulgence in the "Fun and the Fair," as well as the attractions of the merchandise. Secure in the blessing of the Church, the sanction of the State and the patronage of the people the fairs flourished for many years as a primary factor in the life of the trading community.



FIG. 1.—A VIEW OF LEIPZIG.

The establishing of posts and the construction of railways destroyed in a great degree, however, the utility of the fairs, and they dwindled away in many countries to mere vestiges or rudiments of their former splendour. In England, for instance, there only remain the hiring fairs, for the hiring of farm and domestic labour; a few riotous statute fairs or "statties" where the jollification which accompanied the mediæval fairs has become the main feature; and the scarcely less lively, not to say disreputable, horse fairs. There still survives, however, in the remoter Yorkshire dales the observance of the fair week, held at the end of the harvest, when the country folk have time and money to spare. The proceedings commence with special services in the churches and chapels on the Sunday. Booths are erected in the village streets, where local and itinerant traders ply a busy trade throughout the week; while organised sports and entertainments as well as the usual swings and merry-go-rounds are, of course, not lacking.

On the Continent, however, there are still fairs which are far from being obsolete anachronisms or merely interesting survivals; and of these the Leipzig fairs, owing largely to the fostering care of the Chamber of Commerce and the municipal authorities, are among the most important, yielding pride of place only to those held in Nijni Novgorod and other centres in Russia. The ancient practice of holding the fairs in spring and autumn is still found convenient, though the conditions have changed since the days when winter practically suspended all traffic in the North of Europe, so that consumers had to use up the supplies laid in during the autumn, and producers were occupied in preparing fresh stocks to sell in the spring. In an altered form the fairs still find their place in the business life of the modern world. Like an old castle that, being fitted with electric light and lifts and all up-to-date conveniences, is transformed into a comfortable residence, so the Leipzig fairs have been adapted to modern necessities. Now, however, instead of a retail business being done, the trade is wholesale, wares being bought and sold on sample. Some firms, indeed, sell off their samples by retail at the end of the fairs, and this leads to an invasion of bargain hunters; but the larger dealers evidently regard this as a nuisance, as polite but firm notices to the effect that no samples are on sale are freely displayed.

The particulars of the Leipzig fairs and of the regular exhibitions at Leipzig, as compiled by the "Mess-Ausschuss der Handelskammer Leipzig," are as follows:—New Year's Fair (Neujahrsmesse).—Principally for fur goods, leather, and similar articles, also for textile products, at the same time also a retail-dealers' fair. Easter Fore-Fair (Oster-Vormesse).—Exhibition of sample-stocks of ceramic, glass, metal, wood, paper, leather, india-rubber, bone, and celluloid goods, articles of art and luxury, house and kitchen utensils, room ornaments, haberdashery, and fancy articles and toys, carnival and cotillon articles, puzzles, Christmas tree ornaments, artificial flowers, soap and perfumery, toilet, travelling, and sporting articles, writing and drawing requisites, school and office utensils, musical instruments and works, automatic, scientific, and trade instruments and requisites, and all kinds of similar goods. Easter Fair (Ostermesse).—Principally for fur goods, leather, and similar articles, as well as for textile productions, at the same time also a retail-dealers' and show-fair); Easter Leather Fair. Michaelmas Fair (Michaelismesse).—For fur goods, leather, and similar articles, as well as for textile productions; at the same time also a retail-dealers' and show-fair, also Exhibition of sample stocks of the same trades as in the Easter Fore-Fair. Stationery Fair (the so-called Papiermesse), an exhibition of the Central German Paper Making Association, takes place in connection with the Easter Fore-Fair and with the Michaelmas Fair. Cardboard Fair (the so-called Kartonnagenmesse).—Exhibition of the Central Association of German Cardboard Manufacturers. Sporting Articles Fair in September; Michael-

mas Leather Fair. The Bristles Markets (Borstenmärkte) begin on the first Monday in Lent, and on the last Monday in June. The Bristles Fairs (Borstenmessen) begin at the New Year's Fair; begin at the Easter Fair; begin at the Michaelmas Fair; their duration is not exactly determined. Yarn Exchange (Garnbörse).—Four times a year. Meeting of spinners, dealers, weavers, and other wholesale consumers for the exchange of opinions and for the conclusion of contracts, also connected with the exhibition of novelties in textile manufactures, such as apparatus, patents, &c., in the Neue Börse, Tröndlin-Ring, occasionally also of samples of textile exports to foreign countries, samples of cotton harvests, &c. Exhibition of the German Furriers' Society (Ausstellung des Deutschen Kürschnervereins) in April.—Exhibition of novelties in the fur-clothing trade, including linings, trimmings, tools and machines, stands and busts for shop windows, &c., held in the great hall of the Zoologiseher Garten, Pfaffendorfer Str., with its ante-rooms.

The Sample-Stock Fair (for ceramic, glass, metal, wood, and paper goods, haberdashery, toys, &c.) lasts only for the first week. The Easter Fore-Fair begins regularly on the first Monday in March and the Michaelmas Fair regularly on the last Sunday in August. It is in these two fairs, and especially the former, that our readers are more particularly interested, as on these occasions extensive displays of pottery and glass are made, and buyers attend from all parts of the world. Good orders are booked, and in the course of my visit to the Easter Sample Fair, which opened on March 3, I plainly saw that there was plenty of trade that now goes past our shores which might yet be done by British firms who would send representatives and samples to the fairs and would adapt their goods to the requirements of foreign markets. To indicate what these requirements are by describing the goods shown and sold is one of the purposes of this article. Another is, to show under what conditions the business is transacted.

At the Easter Fair this year over 4,000 firms were registered as exhibiting samples. The exhibitors belonged to the following countries :—The German Empire, 3,699; Austria-Hungary, 252; France, 45; Holland, 11; Switzerland, 19, Great Britain, 19; Belgium, 9; Italy, 10; Denmark, 5; Russia, 2; Sweden, 3; Norway, 3; North America, 4; and Asia, 1. The number of visitors to the town was estimated at 16,000. According to comparative figures given in the Handbook of the Leipzig Chamber of Commerce the number of sellers exhibiting in the year 1907 at the Easter Fair was 3,358; in 1908, 3,501; in 1909, 3,444; in 1910, 3,682; in 1911, 3,762; in 1912, 3,849. At the Michaelmas Fair the numbers averaged slightly less. The number of buyers at the Leipzig Fairs whose names are registered, and of whom also the majority attend both the spring and autumn fair, amounted, according to the same authority, in the year 1907 to 10,618; 1908, 11,054; 1909, 11,722; 1910, 12,359; 1911, 13,387; 1912, 14,010. As to the diversity of nationality of the buyers who attend the Fair I can personally attest. I interviewed one gentleman who had just sold some goods to a Russian, and another who was angling for the attention of an Austrian customer. In one showroom a much respected Londoner was booking an order at one end, while a strongly accented American was doing likewise at the other. I had evidence of the presence of several other English and American buyers at the Fair, although I did not meet them. Many lady buyers were to be encountered, the trade evidently having attractions for the sex abroad as well as at home.

The varied nature of the articles dealt in at the Easter Fair has already been referred to. Toys form one of the principal items; I suppose I saw all the playthings which will be produced next Christmas as the "latest novelties" to delight the hearts of the juvenile members of the community. There are also to be seen a heterogeneous assortment of "fancy goods" or "presents" in leather, bone, paper, cardboard, celluloid, wood, and metal; while the infinity of detail extends even to glass eyes, dolls heads, and Christmas tree ornaments. Pottery and glass, however, with which we are chiefly concerned, constitute quite an important section. In the official directory of the Fair (referred to below) well over 100 names appear under the heading of "Glassware," and more than 200 under "Porcelain"; besides a good many given under sub-heads, but not included in our enumeration as some are duplicated.

The accommodation provided for the display of goods at the Fairs is now in a transition stage.



FIG. 2.—A STREET SCENE IN LEIPZIG AT FAIR TIME.

Formerly the business was transacted in a veritable rabbit warren of small-roomed buildings opening on to narrow courts and alleys; but the ever-watchful municipality stepped in and provided first the "Kaufhaus" and, later, the Handels Hof, and the success of these led to private enterprise preparing similar establishments. In general, these huge structures are built in the form of hollow squares, each round its "hof" or courtyard; this arrangement gives plenty of window space. Within, the floors are traversed by central corridors, on either side of which are stands and small rooms. In the newer buildings every room has an outside window. Series of two or more rooms can be engaged if one does not suffice, and, if desired, the intervening partitions can be removed. The newer buildings are well provided with heating apparatus, lifts, lavatories, and electric light. As is only to be expected, they

are supplanting the older buildings, many rooms in these showing "to-let" signs, while some are being pulled down to be replaced by a new "hof" Rents for rooms at Fair-time are high. Prices named to me were £25 per week and £250 per annum for a single room. The locations of the different firms are notified by projecting placards, as shown in the accompanying illustration. On the new buildings these are all uniform in size and shape,



FIG. 3.—THE NEW RAILWAY TERMINUS, LEIPZIG.

an arrangement which facilitates business, though it is less picturesque than the older plan. Ground-floor window space is very scarce, as the shopkeepers are making their own harvest during Fair-time. Thus it happened that I saw familiar makes of crockery sharing windows with neckties, books, or stationery.

Although Leipzig is a city of considerable size (the inhabitants number 600,000), the business of the Fair is concentrated in a small area, less in size than the Holborn Circus region in London, or even than the Murray-street district of New York. The streets of the market quarter during the Fair season present a busy sight, being thronged with visitors of many nationalities, diversely garbed, and speaking many languages. Up and down the roadways parade long files of "sandwichmen" bearing placards on poles and distributing handbills; others wheel gaily-decorated barrows displaying novelties in toys or hardware. Fancy dress is freely worn, and working models of toys form a conspicuous attraction. The gaze of the onlooker wanders from a chattering dwarf to a mechanical lady mounted on an ostrich, or a tiny boy dressed in full regimentals and propelling a horse-tricycle. Here is a man wheeling a life-size giraffe or another dragging a huge Newfoundland dog. Yonder a barrow bears a model greenhouse, and another a dainty arbour. Then comes a man walking on his hands, and another carrying a fully-dressed doll on the top of a long pole. The onlookers throng the kerbstone and view these processions with evident delight; while the wayfarer who is in a hurry must needs take to the roadway at the risk of being taken for one of the freaks. Other crowds gather round the windows, where mechanical toys are shown at work or the gramaphones' raucous voices rise above the clamour of the crowd and almost drown the shouts of the cheery coachmen who seek to force a passage through the press.

The comfort and convenience of visitors to the Fair receive the sedulous attention of the almost paternal municipality. Access by rail is quick and easy. The new central terminus, which we illustrate, when completed will be one of the largest in existence.

Food and drink are to be had at reasonable prices in the restaurants, usually with exceedingly good music into the bargain. Hospitality is profuse and cordial; the "Messe" cigars also have a particularly high reputation. Plenty of entertainments are provided during Fair-time, and the city of Leipzig is rich in open spaces and museums, while beautiful walks can be taken through the extensive woods and parks that lie within easy reach. Book-lovers will find a true Mecca in the book-industry museum, for Leipzig is one of the chief publishing centres of the world.

The lack of bedroom accommodation at Fair time is a well-worn jest, and post-cards are sold depicting the unfortunate sojourners paying high prices to be allowed to occupy a chest of drawers, a desk, a waste-paper basket (just right for an Editor!), a roof ridge, or a gutter. As a matter of fact, the lodging arrangements are "pooled" by a Town Committee. If you want a room in a hotel, you must book it a long time in advance; but the committee will find you a lodging to suit your requirements if you fill in a form stating what you require, and what you are prepared to pay, and, all things considered, the expenses of your visit need not be extravagant.

A further instance of the fatherly care of the Municipality is seen in the provision of interpreter policemen who walk the Fair district, placarded "English" or "Français." One of the most admirable institutions is the bulky directory of exhibitors at the Fair, which is presented gratis to anyone on registering his name and business at the "Stadtische Handels Hof."

Special concessions are offered by the German Customs Department in the admission of samples duty free. But I was informed by an unquestionable authority that these were of no use in respect of pottery and glass. The Customs duties are so jealously guarded that every article thus admitted must be produced for inspection on demand. Thus a broken piece must not be thrown away for fear of giving rise to suspicions that it has been sold and the revenue thus defrauded.

THE GERMAN MARKET for pottery and glass is still well worth catering for by the British manufacturer, especially as many suitable lines can be cheaply produced. The people are diligent and capable, and, in spite of the heavy taxes which they have to bear, and concerning which they were loudly complaining at the time of my visit, they have plenty of money to spend. They possess, too, a rich store of house-pride, and do not spare expense to make their homes beautiful. The careful housewife likes even her kitchen utensils to have a comely appearance, while there exists a discriminating artistic taste for purely decorative ware. What this taste inclines to constitutes an important study for the manufacturer who desires to place his goods on the market. The days of "This is what I make, take it or leave it," are now gone by; but really suitable goods will still sell freely, in spite of tariff obstacles and transport difficulties. In reporting on the German wares at the Brussels Exhibition a few years ago, I stated in THE POTTERY GAZETTE that there appeared to be in Germany a strong tendency toward simplicity in form and decoration, apparently as a reaction from the extra-

vagances of the "art nouveau." That movement has gone on since with increasing force, and the few British manufacturers who were quick enough to perceive the tendency and act upon it have, I know for a fact, reaped a rich reward. The "art nouveau" was really a splendid failure; for it ignored the dual principle on which all conceptions of beauty are based. Into this principle two elements enter, the straight and the curved, rigid and flexible, light and shade, and the secret of true beauty lies in holding the balance between the two and combining them in equal proportions in a harmonious whole. Thus in a tree there is seen the upright and yet rounded stem; in the human form there is the erect posture and the curved outline; and so on. But the "art nouveau" appeared to be founded on a belief that "the true line of beauty is a curve," and wherever the enthusiastic exponent came upon a straight line he knocked it concave or pulled it convex or twisted it into waves and spirals. Similarly in the case of colour, he used vivid lines and dense shadows with startling effect, but without any sense of proportion, taking the eye by storm, even as "ragtime" music does the ear. But modern German taste will have none of this. One trembles to think of the fate that would be meted out to a "ragtime" musician by a German audience, while to offer the German buyer any startling or over-ornate ware is certainly to court disaster.

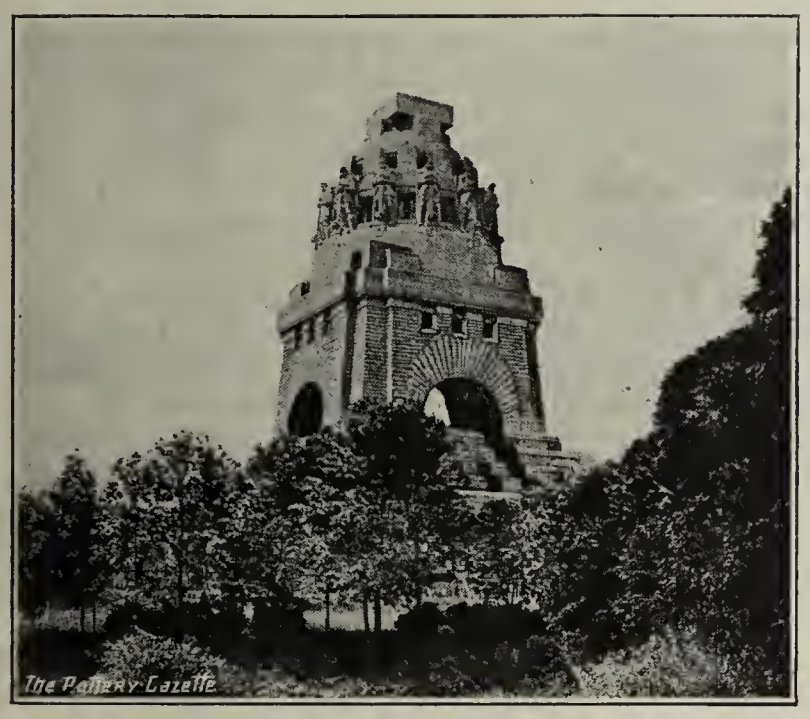


FIG. 4.—THE LEIPZIG BATTLE-MEMORIAL.

If anything, the pendulum of taste has swung too far in the opposite direction. The severely simple is now in vogue. The favourite forms are blunt, solid, massive—at times almost rude and uncouth. They are well typified by the illustration here reproduced of the huge monument which is now being erected on the outskirts of Leipzig to commemorate the centenary of the "Battle of the Nations" in 1913. The same reaction applies to the use of ornament. All colours must be soft tones and shades, all designs must be severely simple. Geometrical patterns, narrow bands, small sprigs and sprays and festoons, these are the designs that are now used by German pottery and glass manufacturers for their home market. And they must be used, too, by the British manufacturer who would sell his every-day or bread-and-cheese wares in that market. Of course, some more elaborate lines can be placed—in the case of art wares, the nude (or, as poor Trilby called it, the "altogether") is more permissible than in England; and in wine-glasses and decanters, brightly coloured and richly gilt wares find a certain market—but the bulk is of the kind which I have described. And if my remarks help a few of our friends in the Potteries to win some good orders, then my indulgence in this little essay on style will not lack justification. As has already been remarked, buyers of many nationalities attend the Fairs, and the goods shown have to be assorted to suit all tastes. What they are like and by whom they are shown may be learnt by a perusal of the following notices of the exhibits of particular firms.

MINTONS, LTD., Stoke-on-Trent, had a ground floor room in the establishment of Mey & Edlich, Neumarkt, 5. Their samples were in charge of Mr. H. Clowes, a much travelled gentleman, expert in strange tongues and gifted with a keen perception of the requirements of the foreign markets which he visits. One of the most successful lines he carries for Mintons, Ltd. is a strong dinnerware, with a stanniferous glaze, which softens the underglaze colouring. This ware is made in a series of patterns, mostly in old French stlyes. A fine type is the "vieux sceaux," with a yellow "écaille de poisson" (fish scale) band, broken by rococo panels bearing floral sprays. In another well-conceived design the panels bear Dutch scenes on a Nevers basis, the colour being a soft blue. In an old Sèvres pattern some hand-painted flowers are introduced with good effect; other good styles are the "Rouen," the "Loire," the "Jerome," the "Clérissy" and the "Chantilly" (of which more anon). All this ware being stoutly made, is much in favour for use in hotels. An excellent range of toilet ware was shown by Mintons, Ltd., comprising the Adam, Louis XIV., XV. and XVI. styles now in vogue. Being decorated by the firm's patent triple printing process the pieces are very handsome, and at the same time the prices are remarkably low. Here were to be seen the "Rouen" pattern in three colours, the "Jena," the "Fontainebleu," the "Paniers Fleuris" (baskets of flowers, very effective), and finally the "Chantilly," perhaps the best of all, with embossed border and dark blue sprays. In tea and coffee sets a line well adapted to the German market is the "Queen Mary," a simple and tasteful shape in white and gold. The "coquille d'œuf" (egg-shell) tea and coffee cups are quite unique in their extreme lightness and transparency; the design showing plainly through the body when a piece is held up to the light. Many old Minton patterns in tea cups still sell well, numbers as early as 615 and 832 being in good demand. Nor is this surprising, for they can hardly be surpassed in elegance of form and richness of colour. In one case turquoise blue and in another emerald green are blent with gold, producing a combination which is a veritable gem of ceramic art. Some very choice plates with paintings by Wright, of fish and game, were also shown. Other useful goods include trays and bowls for fruit and salad, as well as bulb bowls. Some of the last-named have been prepared especially for Holland, and I recognised at the first glance how closely the Dutch taste had been followed. The famous "pâte-sur-pâte" is too precious to undergo the vicissitudes of Continental travel, but other kinds of decorative Minton ware were well represented. The selection of vases merits individual description, but I can only pause to mention one which has a solid ground of laid turquoise blue with a ring of cameos by Boullemier set in raised gilding. The "art" pots and jardinières were chiefly in the "Jugendstyl" (art nouveau or modern art), and were typical of Minton achievements in this direction. A nice assortment of tiles was also on view.

BABST & MARTENS, of Hamburg, occupied two rooms at the "Dresdner Hof" in the Neumarkt, where they displayed a varied collection of English wares, supplied by the firms they represent.

CAULDON (BROWN-WESTHEAD, MOORE & CO.), LTD., Stoke-on-Trent, have a good name on the Continent, well deserved and long established for toilet and table ware.

A neat hexagon-shaped ewer is supplied in several designs (notably the "Berne" and the "Pilatus") and in plain white and gold. Another excellent pattern in toilet ware is the blue-printed "Kaga" in a Japanese style. The Cauldon table ware suits the German taste very well, some of the old patterns, in maroon and gold, dark blue and gold, and white and gold, holding their market against all comers. Some rich old-fashioned Chinese decorations are highly popular. A pretty modern tea set is the "Churchill,"



FIG. 5.—"PILATUS" TOILET WARE (CAULDON, LTD.).



FIG. 6.—"CHURCHILL" TEACUP (CAULDON, LTD.).

with its border of "little pansy faces." The semi-porcelain Cauldon dinner ware, in white and gold and blue, is another sure seller, competing on their own ground with the numerous Continental productions in this material.

STEVENS & WILLIAMS, LTD., of Brierley Hill, had one of the best displays of glass ware in the whole of the Fair. It occupied a very large space, and was admirably shown by their agents, Babst & Martens, exciting much admiration, which sometimes found expression in exclamations of "sehr schön" (very fine). This admiration was fully justified by the appearance of the rows of vases, bowls, carafes, decanters, jugs, &c., in richly cut crystal which may be styled, like the diamond, "of the first water." Special reference is claimed by a huge salad bowl on a massive foot, and by a cleverly produced "kirschen wasser" flask. Stevens & Williams, Ltd., are no whit behind their ceramic confrères in catering for Continental taste. As coloured drinking glasses and decanters are required, they supply them in rich ruby red, Royal blue, and delicate emerald green. They also supply cheaper grades of tumblers and water bottles, and some excellent engraved vases.

GIBSON & SON, LTD., of Burslem, produce jet and Rockingham tea pots and coffee pots which are in great request on the Continental markets. A good representative selection of these occupied a corner of one of Babst and Martens' rooms. The samples ranged from the humble plain brown or brown and green, up to the silver lustres and richly-ornamented varieties, with a veritable prodigality of embossed and coloured decorations. The coffee pots with percolators will be highly appreciated on the Continent, where coffee is made as it should be made, and is freely consumed accordingly. With the pots were associated sugar bowls and milk or hot-water jugs, all en suite; nor was there lacking even a butter-dish. I was pleased to learn that such typically English productions as Burslem teapots and coffee pots sell well in Germany.

LOVATT & LOVATT, of Langley Mill, are another of the firms represented by Babst & Martens. Their specialities as displayed comprised fireproof ware; stoneware vases, plain and ornamented; tea and coffee pots, green, and yellow and plain brown; pipkins and pudding-moulds that should appeal to the diligent German housewives; a dog-dish, appropriately marked "Hund," and a tiny model hot-water bottle.

The WORCESTER ROYAL PORCELAIN CO., LTD., are represented by Babst and Martens for ornamental wares only; and of these goods a grand display was made. Most of them were of the new patterns described in our March issue; but I cannot pass on without bestowing a special word of praise on the two large vases, gilt-mounted and bearing in panels on a deep blue body, the one a bunch of beautifully painted roses, and the other a lovely landscape.

BLAIRS, LTD., of Longton, also shared the discriminating hospitality of Babst and Martens. Mr. Blair himself was in attendance, although in the course of my short visit I did not have the pleasure of meeting him. It is always a pleasure to see Blairs' china, and I was especially glad to find that they too were among the manufacturers who have studied the market and chosen their goods accordingly. They showed plenty of plain white and gold, blue and white, and red and white, in simple shapes, of which the "Corinth" may be regarded as a type. A more elaborate form was the "Etruria," this being octagonal, and having the surface of each alternate facet rounded and coloured. Mention must also be made of some fluted tea and coffee pots, striped in quiet shades of green or red and white.

Our list of Babst & Martens' agencies must conclude with a reference to a few small but choice lustre vases produced by PILKINGTONS' TILE & POTTERY CO., LTD., of Clifton Junction, near Manchester, and some pleasing German table ware of the conventional type described in our paragraph dealing with German pottery in general.

THOMAS WEBB & SONS, LTD., of Dennis Works, Stourbridge, showed their high-class glassware in a well-lighted room in the Speck's Hof. The samples were indicated to me as having been specially designed for the Continent. Some of the wine glasses and goblets were accordingly gaily coloured and many were lavishly cut and engraved. A great deal of the ware was, however, of a less pretentious description, yet thoroughly good in quality, the body being heavy and clear. A massive ice-bucket was too weighty to be lifted with one hand and must have contained a lot of "metal" and that of the very purest. The classic glass cameos are appreciated everywhere, and no collection of the products of Thomas Webb & Sons, Ltd., would be complete without them. I was shown

several beautiful bowls and plaques, the "Sea-Nymph" being perhaps the most successful, though where all are so good it is difficult indeed to select the best. The firm also have a galaxy of electroliers, some with pendant prisms; while the little "Owl" globe beamed down upon me like an old friend. The "roc's egg" of this exhibit, however, was a fine table centre-piece, composed of a large rose bowl, bucket-shaped, flanked by two candlesticks and four flower vases, all in the best cut glass, on a gilt mount.

This does not quite exhaust the list of English wares at the Fair. The Heathcote table ware of H. M. Williamson & Sons, of Longton, a good class soft porcelain, with blue and white underglaze decoration, was shown by their Continental agent, Mr. L. Katz, of Düsseldorf, together with the Limoges china and American cut glass of Bawo & Dotter, whom Mr. Katz also represents. In a stationery shop near by Mr. S. Dresdner, of Hamburg, handled the jet and Rockingham tea and coffee pots made at the Top Bridge Pottery, Longport. There may have been yet other British firms represented, and if I have overlooked them I must tender my apologies, assuring them that the neglect was not intentional, but was due to the necessary hustle of my visit and to their names not being included in the official guide-book.

Villeroy & Boch had a suite of rooms in the Handels Hof, where they showed the products of their seven potteries and one glass factory, situated in various parts of Germany. The earthenware from Mettlach included some new toilet sets designed by Professor A. Niemeyer, of Münich, the best decorations being narrow floral bands. Others of Professor A. Niemeyer's designs were applied to toilet ware from the Dresden factory, a commendable combination being that of chrome yellow and gilding. Some specimens of these we are enabled to illustrate, through the courtesy of Mr. D. Nestle, who has a large stock of the productions of Villeroy & Boch most suited for the English market at his show-rooms at 7, Hatton-garden, E.C. An interesting item was the lettered kitchen jars for containing culinary ingredients. The wording can be done in any language, and the designs are very pleasing. They show, indeed, that a kitchen can be made as artistic as any other room, an important consideration in establishments where the mistress herself presides over the culinary operations. Another of the exhibits consisted of showy wall plaques with views, game, and mottoes painted on them. Mettlach sent, too, a quantity of blue Delft and stoneware "steins" or beer-mugs. An ingenious pattern for students was modelled and painted to represent the backs of a ring of books. I was shown a rich collection of hard porcelain plates and vases in the true Limoges style, though produced at one of Villeroy & Boch's works in Germany. This versatile firm also turn out crystal and half crystal glass from their factory at Wadgassen, and they displayed an assortment of useful and ornamental glassware, with cut and coloured decorations.

The Hessian Potteries (Wächtersbacher Steingut Fabrik G.m.b.H.) are represented in London by Wm. Seelig & Co., of 19, Fore-street, E.C., and I found Mr. Seelig busily engaged with an English buyer in the large showroom in the Mädler passage, where the products of the Fabrik were set out. These consist chiefly of useful and somewhat heavy earthenware goods, very highly glazed, and sparingly decorated in soft shades. The ware is seen to the best advantage in the toilet sets, one charming decoration representing grey maple leaves with chrome yellow "keys" drooping below. This design should prove very popular in Canada, "the land of the maple leaf." Some narrow floral bands are very pleasing, notably one with a white chrysanthemum "motif" on pale grey, and another with a ring of dark blue pansies. A very typical toilet set has an eight-sided ewer and sixteen-sided basin, very thick and heavy, with the angles gilt. The rims are bevelled and also gilt. Another even more severe type of ewer and basin is square with rounded corners and bevelled edges. The strict geometrical forms are decorated with appropriate designs—dots and circles, lines and stripes. Indeed, a favourite scheme is a plain vertical stripe, alternately black and white, blue and white, or red and white. This decoration, like the chrysanthemum and pansy borders mentioned above, is also applied to table ware, which the Fabrik produces in large quantities. The striping looks best on the large "drain-pipe" umbrella stands. A line that pleased me particularly was the special small-size toilet sets for children, with pretty coloured pictures on them, and even miniature washstands to match. The German children are charming little creatures and quite deserve



Fig. 7.—Villeroy & Boch's Toilet Ware. [*Photo. by "The Pottery Gazette."*

the indulgence of which these wares are an evidence. A novel type of washstand, both for children and adults, has box or barrel-shaped ewers, balanced behind the basin on bearings like those of a gun carriage. The Hessian Potteries make a complete outfit of kitchen utensils, mostly blue and white, with lettered receptacles. I must also mention in passing their open-work trays, dishes, &c., and their fish and game services, with embossed and tinted representations of deer, hares, ducks, and fish. But a section which claims more attention is that containing the art vases (mostly amphora-shaped), bowls and trays. These have principally dark grounds from which slightly conventionalised flowers stand out in striking colours. The ground is sometimes broken up with small lines in a craquelé effect. One of the best designs is an orchid in sienna brown and chrome yellow, with black striped foliage on a fawn-coloured ground. The wistaria, beloved of old Japan, appears in light yellow and dark blue, with green foliage upon a dark green or brown background. Pansies, too, are similarly treated. Besides the floral decorations, good use is made of heart-shaped sequins, vermil on-coloured and symmetrically grouped on a very dark ground.



FIG. 8.—VASES IN SERAPIS FAÏENCE: MR. E. WAHLISS (see p. 415).



FIG. 9.—OPEN-WORK PORCELAIN: SPRINGER & CO. [*Photo. by "The Pottery Gazette."*

SPRINGER & Co., of Elbogen, Bohemia, were established in a roomy apartment in the Dresdner Hof. They are best known in England for their extensive line of trinket sets and tea sets, and their white highly-glazed open-work

porcelain, and a good assortment of this was to be seen, comprising trays, dishes, fruit stands, and flowerpots. Some of these latter reproduced very accurately the appearance of plaited basket work. We illustrate on page 414 a selection of these wares as shown by their agents, Dixon & Co., who keep a full range of their latest novelties at 35, St. Bride-street, E.C. Springer & Co. have also other lines which are not so familiar to our readers. One of these is a coloured hard-paste porcelain, the body being of a blue-grey tint throughout. This is worked up with good effect into table ware for the home market, simple but pleasing underglaze decorations being applied in blue and gold. The description will be recognised by those who have eaten from this ware in the German dining-cars. As a contrast to these were some highly ornate toilet sets and table ware prepared especially for South America. Other wares that I saw were intended for Austria. Indeed, Springer & Co. study closely the requirements of various markets, and their large establishment enables them to turn out goods suitable for all.

The Alexandra Porcelain Works (Ernst Wahliss), Turn-Teplitz, Austria, showed a great number of samples in a spacious suite of rooms in the huge new building opening on the Mädler passage (formerly Auerbach's Hof, the site of Auerbach's Cellar, well known to readers of "Faust"). Here was set forth a wide range of ceramic products, some richly decorated and some severely plain, some costly articles of luxury and some low-priced wares for daily use. There was quite a zoological garden of very naturally modelled animals; nor were there lacking other figures accurately reproducing the human form. A line which particularly took my fancy were the round and oval china boxes, coloured in delicate shades of blue, green, &c., with chased and gilded metal mounts. Some of these also bore neat cameos in classic styles. Mr. Wahliss also devoted a whole room in the Handels Hof to his "Serapis" Faïence. This remarkable ware, which has been mentioned several times in The Pottery Gazette, represents a definite attempt to produce a distinctive art style which is not a mere imitation or adaptation of some former phase. For this reason specimens are now being purchased in considerable numbers by museums and connoisseurs. As a new art ware "Serapis" must necessarily partake of the character of the "art nouveau"; but it escapes the wild extravagances referred to in an earlier paragraph. The clocks, figures, vases, &c., have curves in plenty, but they are elegant curves, and though quaintness is frequent the grotesque is avoided. Nor is there lacking a certain measure of regularity to keep, as it were, the riotous curves in order. Similarly although much of the colouring is vivid, it is often relieved by the contrast of black or bronze. Even so, some of the pieces are so striking that they would inevitably "kill" any other decoration in the same room. But they are so predominately handsome that they are quite worth giving a room to themselves. A special feature of the "Serapis" faïence is that the ornamentation of each article is specially designed to suit the form of that particular piece. It would be too daring for me to undertake to depict in words any one of the specimens of this remarkable ware; so this general description must suffice. But I must put on record the impression made upon me by the gorgeous robes in which some graceful female figures were draped. The illustrations on the opposite page are from photos supplied from the firm's London showroom, 88, Oxford-street, W.

The Compagnie des Cristalleries de Baccarat, of Paris, displayed the famous Baccarat glassware in a room overlooking the market-place, and in a long annexe adjoining. Seen in a good light, the "coup d'œil" was quite a galaxy of brilliance. The collection was specially rich in wine glasses and goblets, cut, engraved, and coloured in a bewildering variety of forms. Long, thin stems and short stout stems and globular, shallow and tapered tops, all rang the changes, until it seemed that there must be a special shape of glass designed for every kind of wine made in "la belle France." A selection of



Fig. 10.—Wine Glasses (Cristalleries de Baccarat).

representative shapes are illustrated here by courtesy of the firm's London agent, Mr. E. St. Clair, of 48, Hatton Garden, E.C. Accompanying the glasses was an array of decanters and jugs. A form of decoration in which cutting and colouring were happily combined was seen on



Fig. 11.—Wine Glasses (Cristalleries de Baccarat).

a few lamps and trays, the cutting being so placed as to leave large smooth areas which were coloured red or blue. A unique form of decoration consisted of graceful classic figures in low relief. The Compagnie also produce an immense number of vases, scent bottles, toilet bottles, fruit dishes, rose bowls, electroliers, &c., many fine specimens of which I was privileged to see at the Fair.

The Société Anonyme des Cristalleries du Val St. Lambert, of Belgium, occupied two rooms on the first floor of the Kaufhaus. Their fine glassware was very advantageously displayed, a row of cut glass stoppered

decanters showing up particularly well. The heavy jugs and vases made a good contrast with the light wine glasses and decanters. A pair of glass fruit baskets with handles were at the same time useful and ornamental, while, among the utility goods, distinction must be accorded to the butter coolers and tumblers. A few choice engraved vases were pleasingly coloured.

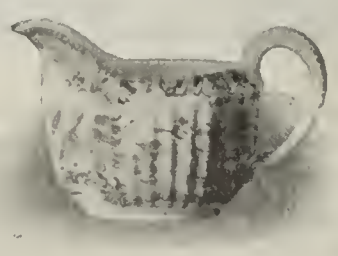
Specimens of the productions of the CRISTALLERIE DE PANTIN TOUVIER ET CIE, chiefly wine glasses and decanters, together with the engraved and coloured crystal lamps and vases of the CRISTAUX D'ART GRAVÉ "DE VEZ," formed part of the selection of wares shown in a room in the Dresdner Hof by Matthei & Toftmann, of Berlin.

GUERIN & POUYAT, of Limoges, were accommodated at a book shop in the Universitätsstrasse, where their fine hard porcelain plates and dishes for a time shared the window space with tomes and folios. This exhibit comprised some grand hand-painted and plain examples with wide borders in the fine gilding and the deep "bleu de Sèvres" that is the "royal purple" of the ceramic industry. A little collection of the famous French fireproof ware was also on view, a new decoration in green and gold being applied to the coffee pots and casseroles.

Other foreign pottery to be seen at the Fair included the well-known wares of Delft and Copenhagen, some artistic lustred pottery from Utrecht, glassware from the United States (shown by two firms), and from Sweden, and a quantity of the highly ornate Bohemian glassware, contrasting with the plainer German ware, even as the levity of the "vie de Bohème" contrasts with the solid Teutonic character.

The German pottery and glass exhibits were too numerous to be dealt with individually, nor do we think that our English friends would appreciate a detailed account of foreign goods. Suffice it to say that their nature is accurately indicated in the earlier paragraph dealing with the requirements of the German market, and in the descriptive notices of the products of those firms who are already known to our readers. There was also a plentiful sprinkling of art figures, vases, and clocks, of lavishly ornamented porcelain groups, vases, &c., in the Dresden style, and of the inevitable and inimitable "steins" or stoneware beer-mugs, with printed, coloured and moulded decorations. Of course the bulk of the German products are meant for German buyers, and the home requirements are followed very closely. So closely, indeed, that certain patterns appear to possess a kind of infection, exactly similar articles being seen in several showrooms at one time. But this imitative instinct is, we know, by no means monopolised by German manufacturers.

Much more might be added concerning the busy Fair and its frequenters, as well as the beautiful city and its homely, hearty folk. But I hope I have made it clear that the Leipzig Fairs present opportunities for doing business that are not used sufficiently by British manufacturers nor, perhaps, by British buyers. The nature of this business and how it may be done I have endeavoured to make clear. This article will not have been written in vain if it helps to increase the representation of the United Kingdom at the Leipzig Fairs, and to extend yet further the friendly and profitable commercial relations which exist between the two great branches of the Teutonic race.



EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are taken from the March issue of the Board of Trade "Labour Gazette":—

THE POTTERY TRADES.—Employment in the pottery trades continued good, and showed an improvement on both a month ago and a year ago. Returns from firms employing 18,640 workpeople, in the week ended Feb. 22, showed an increase of 0·4 per cent. in the number employed, and 2·6 per cent. in the amount of wages paid, compared with the previous month; compared with February, 1912, there was an increase of 2·6 per cent. in the number employed, and of 6·9 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	3,099	£3,554
Earthenware manufacture ...	11,585	10,963
Other branches (including unspecified)	3,956	3,650
Total	18,640	£18,167

Districts.	Number employed.	Wages paid.
Potteries	14,007	£13,107
Other districts...	4,633	5,060
Total	18,640	£18,167

In the Potteries employment continued good, and showed an improvement both in the china and in the earthenware branches. In Scotland it was adversely affected by the carters' strike at Glasgow, but there was some improvement in the latter half of the month.

THE GLASS TRADES.—Employment generally continued fairly good. Returns from firms employing 8,113 workpeople in the week ended Feb. 22 showed a decrease of 1·1 per cent. in the number employed, and an increase of 2·0 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 0·8 per cent. in the number employed, and of 5·0 per cent. in the amount of wages paid.

Employment with glass bottle makers was good at Castleford, Mexborough, and Leeds, and fair at Barnsley. At Wakefield it was bad owing to works being closed for repairs. Employment was good in Lancashire, and at Sunderland, Glasgow, Portobello, Bristol, and Dublin. With sheet-glass flatteners at St. Helens employment was fairly good; with sheet and plate-glass workers it was good. At Birmingham it continued fair with flint-glass makers, and good with plate-glass bevellers, with some overtime; with flint-glass cutters it declined to moderate. In the Wordsley and Stourbridge district it was good with flint-glass makers and cutters, but again showed a slight decline. With pressed glass makers on the Tyne and Wear employment was moderate. With glass blowers in London it was fair, rather better than a month ago, but not so good as a year ago.

Branches.	Number employed.	Wages paid.
Glass bottle	5,958	£8,368
Flint glassware (not bottles) ...	1,615	1,781
Other branches...	540	649
Total	8,113	£10,798

Districts.	Number employed.	Wages paid.
North of England	730	£915
Yorkshire	4,720	6,705
Lancashire	825	1,009
Worcestershire & Warwickshire	980	1,210
Scotland	495	604
Other parts of United Kingdom	363	355
Total	8,113	£10,798

The comparison with a year ago is affected by an increase in rates of wages.

THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

By One of Our Staff.

(*Continued from page* 289.)

XII.—ARDING & HOBBS, CLAPHAM JUNCTION.

PASSENGERS by the important lines of railway which pass through Clapham Junction cannot fail to notice the large block of buildings, surmounted by a clock tower, which stands within a stone's throw of the station on its eastern side. These are the premises of Arding & Hobbs, drapers, furnishers, &c. The handsome shop fronts face upon the point of intersection of several busy thoroughfares, and are readily accessible by train, tram and motor 'bus from distant and populous districts. The business was established more than forty years ago, when Clapham was one of the most select and aristocratic of the London suburbs. Since then the character of the neighbourhood has changed considerably, but the firm have adapted themselves to its requirements, and show conclusively that a prolonged existence is not incompatible with quite youthful activity. The business naturally suffered a severe set back from the disastrous fire of Christmas, 1909, but it has since arisen like a phœnix from the ashes, after a year of great difficulty spent in temporary premises, and now holds a leading position among the thriving establishments which cater for the wants of the inner ring of London suburbs.

It is with the pottery and glass department that we particularly have to deal, and the writer is pleased to record some impressions gathered during a recent visit, when he was shown round by Mr. F. G. Tanner, the capable head of the department. Before the fire two whole rooms were devoted to the display of pottery and glass, but in the course of rearrangement these wares were relegated to three "bays" on the ground floor, one of which is shown in the accompanying illustration. These "bays," though lacking in convenience in some ways, afford excellent opportunities for the art of display, the arrangement being, as our readers will see, practically that of an interior window. I was pleased to learn, however, that energetic management had resulted in such a large increase in the business of the department that it is shortly to be given a great extension of accommodation. The floor space between two of the "bays" now devoted to ornamental brass and copper ware is to be given up to stands for the display of glassware, while a portion of the restaurant adjoining, in a corner of which is already arrayed a choice selection of ornamental pottery, is also to be occupied by this rapidly extending department.



[*Photo. by "The Pottery Gazette."*

A Corner of Arding & Hobbs' Pottery Department.

The means taken to enlarge the scope of the department are distinctly interesting, and have proved highly successful. During February an island window was filled with carefully selected samples of pottery and glass, and, though this proved troublesome to arrange, the labour was thoroughly justified by the result, as many as 25 assistants being required to wait upon the throng of customers in the department at one time. Another conspicuous attraction instituted some few weeks ago was the engagement for a time of a working potter to throw or turn vases in the window, and, later within the shop, as the police object to the obstruction of the footway by the crowd of onlookers. This was part of a novel advertising scheme carried out by the firm, who showed in all their windows the stages of manufacture of

the various goods which they offered for sale. Furniture, Irish tweeds, hats, umbrellas, boots, lace, brushes, &c., all underwent the various manufacturing processes before the eyes of the public. This well-planned and carried out feature created quite a sensation in the neighbourhood, as it certainly deserved to, and, of course, resulted in a large increase of business, both temporary and permanent.

Besides utilising special means of inspiring interest in his department, Mr. Tanner conducts it upon very sound lines, and so retains the customers whose attention he attracts. One very useful practice, both to the department and its customers, is the keeping of a number of stock services of table ware, so that matchings can be promptly supplied; customers are also thus enabled to purchase dinner, tea and breakfast ware all of the same pattern. I noticed, too, that good use is made of price-tickets, every article being plainly marked, and a purchaser can tell at a glance whether the price is likely to suit his or her requirements.

The class of business done proved superior to what I had expected, the stock including a quantity of Royal Doulton ware, some choice Worcester and Longton china, vases and figures in the Dresden style, French fireproof ware, and excellent cut and pressed glassware. Mr. Tanner confirms what we have always contended, that it is more profitable to sell the better-class wares than the inferior, and much less difficult on account of their greater attractions. So, by judiciously selecting the specimens to display, and carefully pointing out their merits, he has been able to raise appreciably the quality of the goods in his department.

The extensive business of the firm has its ramifications in a number of residential districts, where there are still plenty of houses at rents from £40 upwards. There is also a very general movement toward the constructing of flats on the sites of some of the larger houses which have been pulled down, bringing in two or three occupants, and possible customers, where there was only one before in this class of property. As Mr. Tanner remarked, some crockery gets broken almost every day, and so the immediate neighbourhood proves a fruitful source of demand for pottery and glassware. Many purchasers, moreover, come by train from distant parts of Surrey, and the firm deliver from their own vans as far out as at Epsom, Sutton, Dorking and Leatherhead. A new special catalogue which is being prepared for the department will probably greatly facilitate this section of the business.

The final stage of my visit was spent in an inspection of the series of furnished rooms which, though pertaining directly to the very large furniture department, nevertheless prove also to be very good aids to the sale of pottery and glass. These rooms are completely and very tastefully arranged, and are priced at so much per room, or, of course, the items of furniture can be purchased separately. (Thus easy in these days is made the path of the matrimonially inclined.) No opportunity is lost of displaying pottery and glassware to good advantage in these furnished rooms. Plates and dishes are set out on the kitchen dressers, vases and ornaments on the mantelpieces and sideboards, toilet ware and trinket sets in the bedrooms, while in the drawing-room a choice coffee service adds its enticements to those of what is in all respects a most charming "ensemble." These rooms, so admirably arranged, must represent a tremendous selling force, and we should imagine that it would be worth the while of any retail dealer who has not the advantages of a furniture department to borrow or hire some furniture and make a similar display in a small way on his own account. Specimens which look quite commonplace in a shop window or on a shelf, acquire an air of distinction when shown with appropriate surroundings.

Having thus given some account of this thriving department and the means by which its prosperity has been achieved, it only remains for us to congratulate Mr. Tanner and his employers on the success that they have won, and to wish them a continuance of it in the future.

BRITISH POTTERY AT INTERNATIONAL EXHIBITIONS.

A BLUE BOOK just published contains the Report of His Majesty's Commissioners on the International Exhibitions held at Brussels in 1910, and at Rome and Turin in 1911. The report refers at some length to the formation and operation of the Commission and of the Exhibitions Branch of the Board of Trade. Particulars are set forth of the steps taken to secure exhibitors the facilities afforded to exhibitors, the compiling of catalogues, &c. General reports on the three Exhibitions, and detailed reports by the eleven committees who had charge of the arrangements for the different exhibits, are given, as well as an appendix and plans of the British sections.

A paragraph in the general description of the British Section at the Brussels Exhibition says:—"The central portion of the main gallery was devoted to a representative display of ceramics, glass and porcelain, ranging from exhibits of china and glassware for ordinary domestic purposes, including dinner, tea and breakfast services, toilet ware, tiles, faïence, &c., to pottery of the highest artistic and decorative character. Many Continental buyers had been unaware of the developments which had taken place in the production of artistic pottery and glass in this country, and this exhibit, which was representative in the highest degree of the British ceramic industry, achieved an immediate and surprising success. The organisation of this Section was undertaken by Mr. T. C. Moore, who devoted much energy and time to securing the adhesion of the prominent Staffordshire firms. The Royal Commission also desire in this connection to thank Mr. William Burton, of whose wide experience of the pottery trade they were fortunate in being able to avail themselves."

The article on the Pottery and Porcelain Industries, contributed by Thomas Cartlich Moore, Esq., is as follows:—

The British pottery and porcelains shown at the recent Expositions of Brussels and Turin were sufficiently representative to afford a basis of comparison with those of other nations, and to allow us to form an estimate of the possibilities of the ceramic industry in Great Britain. It is a complex subject, because we make—with the exception of hard-paste porcelain—every conceivable variety of pottery and porcelain. While it is scarcely open to question that the general industry has improved and developed, it behoves us to inquire whether some ground has been lost in certain directions; and if this is the case, to investigate the reasons and to suggest remedies.

The British potter is, and always has been, more adaptive than creative. His most ambitious work has been invariably founded upon Classic or Oriental types, with occasional limitations of the productions of Dresden or Sèvres, so that (with the exception of a period of sixty or seventy years, dating from about the middle of the seventeenth century to the first half of the eighteenth) no truly British school of ceramics has existed. With the Continental potters the case was different. The Flemish stonewares, the majolicas of Italy, the Spanish-mauresque lustres, and the faïence of Rouen, Nevers and Moustiers, as well as some of the Delft wares of Holland, are all examples of purely national types of pottery. At some

time or other the English potter has imitated all these, but he has done it in his own way; and to his credit it is to be noted that he was the first to produce the jasper body, bone-china, parian and granite ware (hard earthenware), in which four types of pottery he still maintains an undoubted supremacy—and, in, fact his contributions towards the sum of the materials at the potter's disposal may safely be put before that of any other nation.

His genius has lain mainly in the excellence of his adaptations rather than in the creation of types. He is better at synthesis than analysis. Josiah Wedgwood copied Greek designs and forms; but he excelled the Greeks in the finish, quality, and durability of his wares. The Greeks were great designers, but not great potters. Wedgwood (who is quoted because he embodies the merits of the British potter generally) had a definite aim—that of making wares that would sell, and give satisfaction to his customers when delivered. He was ambitious of making pottery superior to any that had been previously made in this country or in any other, because he believed he could find a sale for it on that account. The Classic style was then fashionable, and was also suited to what he had in mind. A great designer and competent modeller —Flaxman—was available, and the "throwers" and "turners" of his day were fine craftsmen.

The method of "sprigging" little bas-reliefs in clay from metal and stoneware moulds had been introduced by the brothers Elers, who had never thought of putting white figures on dark grounds. Wedgwood did think of it, and he made his jasper body for the purpose. Most of the processes he employed were mechanical, and sufficiently economical to enable him to fix a profitable selling price which was yet reasonable enough to encourage ready sales. He considered, and rightly, that an article produced by multiplex methods was not necessarily inartistic, any more than a medal struck by hundreds from the same die should be deemed so. And it should be remembered that there is a craft even in the mechanical reproduction of a good design, for two printers may take a print from the same etching, and one shall be a work of art and the other not.

The passion for sound craftsmanship has invariably been a characteristic of the British potter, who has always compared favourably in that respect with his Continental rivals.

This is specially noticeable in the exhibits of several important manufacturers. Messrs. Doulton had a show which for quality, variety and general excellence of design was certainly not surpassed by that of any foreign exhibitor; and when we consider that the exhibit, like that of nearly all the British firms, consisted entirely of staple commodities having a regular sale, it is the more remarkable.

Josiah Wedgwood & Sons had a large display of their historic productions which would demand recognition on the score alone of the retention of the throwers' and turners' crafts. The jasper wares are apparently as finished and sharp as they were in the days of the great founder of the firm, and while there were no new decorative types, there were new notes in decoration and treatment.

Minton's also seemed content to show current examples of their beautiful wares, which should not be absent from any international exhibition, if only to show—together with the Cauldon wares—the highest quality of British porcelain as an artistic material. The latter firm had an interesting display of reproductions of patterns of the early Ridgway period, and a finely modelled centrepiece in white china, perfect in body and glaze.

The semi-porcelain ware—hard earthenware—as exhibited by Johnson Bros. and the Grindley Hotel Ware Co., showed the earthenware body in its highest state of perfection, approaching, as it does, in appearance and quality very nearly to that of the porcelain body, whilst its durability is still greater. In the manufacture of this quality of potteryware the British potter is supreme, being far ahead of any of his rivals, and it is in this branch of the pottery industry that the larger amount of trade is now being done by this country.

Some of the examples shown by these two firms were in plain white (without decoration), of pure quality and extremely beautiful; whilst others had suitable and effective decorations applied to suit the requirements and tastes of different markets.

We may, perhaps, speculate as to whether the present rage for collecting pottery has not something to do with the epidemic for reproductions. Messrs. Booth and the Crown Staffordshire Co. have capable reproductions of old Chinese and Worcester scale and powder blue wares; and Messrs. Ashworth perhaps more legitimately reproduce the old "Mason Japans" and borders. They are successors to the Mason firm, and use the original moulds and engravings. Besides the "Mason" wares they had some excellent metallic and iridescent glazes, fired in a reducing atmosphere.

The exhibit of Messrs. Macintyre is also worthy of notice; the shapes are graceful and the decoration is entirely by hand direct on the pottery in the clay state, and coloured by metallic oxides before being fired. It is subsequently glazed and fired again, rendering the decoration absolutely imperishable.

Mr. Tooth, of Bretby, deserves commendation for his tasteful forms and fine glazes, as well as his ingenious and novel ideas.

While Great Britain showed no attempts in the direction of Grès and high-temperature porcelains, such as have been produced with such marked success at Copenhagen, Sèvres and other Continental factories, we again had evidence that we have the capacity for the production of these types of ceramics. The stonewares of Messrs. Doulton and Messrs. Bourne, of Denby, show that England possesses a fine material which is capable of further development. Doulton's have gone far in the production of architectural stonewares, and also in the decoration of vases, pots and other vessels in their stoneware. But much more is possible in this direction. Messrs. Bourne's exhibit was frankly commercial, and consisted mainly of domestic wares for kitchen purposes, cooking wares, &c. But the material and potting are excellent, and some of the pieces quite artistic in effect from the inherent qualities of the material, which are easily susceptible of great developments.

It has frequently been put forward as a matter of reproach that the Continental potters generally are better equipped with labour-saving appliances than the English factories. It is likely that the caution and conservatism of the English potter make him dubious of the effect of such innovations on the quality of his wares, because he is usually only too ready to adopt any device which he considers helpful. While most firms with a large output have installed the roller method of machine-printing they always retain some hand-presses for special work; and the same principle obtains with regard to the making of the pottery itself.

The net result is, that in the markets of the world British pottery is admitted to hold the first place for finish, durability and decoration.

This position is likely to be permanently held, because the ordinary commercial wares are put on the market at prices very little in advance of vastly inferior goods which are put in competition from other countries; in fact, a fair market is obtained in the competing countries

themselves, notwithstanding the hostile tariffs which, if removed or substantially reduced, would largely increase the demand for British wares.

But while we may regard our commercial position with some complacency, we can hardly speak with the same confidence of the prospects of ceramics as a fine art. In 1870 the congestion created on the Continent by the Franco-Prussian War caused some of the foremost ceramists in Europe to seek an asylum in this country. The result was rather to divert than to assist in the formation of a national type of ceramics. Many ambitious and costly examples of pottery and porcelain were produced, exhibiting generally craftsmanship of the highest order, but mostly of an adaptive or imitative kind. A notable exception, however, was Monsieur Solon, who for many years gave us work of a quite original and individual character, which, in addition to its fine design and superb execution, is pure and legitimate ceramics, being entirely executed in the clay without any mechanical aid whatsoever.

By the lapse of time and the trend of commercial needs, together with the altered taste of the times, this impetus died out, and the personal note in the art of potting in this country has almost died with it. Mr. Bernard Moore, it is true, has given us many exquisite flambés, and some revivals of Oriental processes, which are of rare beauty, and are undoubted achievements from a scientific point of view, and the influence of his work will without doubt be felt in the future. Artistically, too, his flambés are perfect, and it is to his credit, and, incidentally to the credit of the nation, that none of our Continental rivals have equalled his effects, while he has only been surpassed by those great potters who have surpassed all rivals—the ancient Chinese.

The crystalline glazes and certain types of lustred ware, as chemical and thermal phenomena, are always interesting, and often extremely beautiful. In a sense, however, they are accidents, but accidents susceptible of a certain degree of control and direction. The potter is never quite sure of the result, and the charm is that of the unexpected.

The restrictions of commercialism on the one hand, and the leaning towards dilettante specialism in the higher walks of ceramics on the other hand has sharply divided the industry into two opposite camps, widely different in their organisation, methods, aims and aspirations. The higher kinds of pottery made in this country are mainly produced in what may be termed "studio" potteries, and are made primarily for the virtuoso. While their merits are sufficient to command an appreciative reception from persons of knowledge and taste, they are yet, at the best, the work of specialists, who make, for example, excellent glazes, and apply them to graceful shapes, capably potted. Examples of these were to be seen in the exhibit of Mr. Bernard Moore, and also in that of Mr. W. Howson Taylor.

Is this sufficient? Have we in this country the requisite qualifications for the production of the finest types of the ceramic art? Doubtless we have, but the conditions, instead of aiding their necessary concentration, are rather leading to dispersal and the decay of many skilled crafts. Machinery has not entirely deposed the craftsman, but it has deposed the apprentice. We have to consider whether the apprentice is adequately replaced by the teaching in the technical schools.

Our Continental competitors have to deal with exactly the same mechanical and commercial problems as ourselves; but on the Continent the technical teacher is a technician and not a theorist. He is one who has learned his craft in a pottery, and gained prestige by its practice. If he is a thrower, all that is required of him is expert workmanship, together with some ability to teach others the art of throwing.

We need some scheme to arrest the decay of skilled crafts—some efficient substitute for the apprentice system. The new pottery schools now in course of erection in Staffordshire will doubtless accomplish something towards this. Certainly the chemistry of pottery will be as well taught there as in any other pottery centre in the world. The art teaching, too, is efficient, within certain well-defined limits, but the majority of the exhibits suggest a need for a closer relation between the designer and the craftsman. In the finer types of pottery exhibited at Brussels and Turin by English makers the absence of applied decoration of a legitimate, or at any rate of a creative, type was marked. The chief exception was the exhibit of Messrs. Pilkington, whose lustred wares were noteworthy in point of design and colour, and at least equal, in some instances, to some of the finest historic ustred wares, their softened and harmonious iridescence being in marked contrast to the violent exuberance of some foreign lustres (which, however, were a technical triumph as regards the material itself, apart from design and artistic effect). Another instance of design legitimately employed was seen in the exhibit of Birks, Rawlins & Co., of Stoke-on-Trent, where coloured porcelains were used, and the whole of the decoration executed on the unbaked clay.

With the exception of the exquisite flambés and excellent glazes which formed part of the British exhibits, and which certainly did secure for this country special merit, riveting as they did the attention of connoisseurs and securing for themselves the admiration of all beholders, the fact that otherwise there were no epoch-making examples of British pottery or porcelain, and few which would be coveted by the trustees of civic museums or fastidious and wealthy collectors of objects of vertu, is plainly not due to a present lack of capacity for their production. If the artists and craftsmen who are capable of producing the finest work—who are scattered over the various potteries—and who, by stress of circumstances, are engaged mainly on work that is frankly commercial, could be gathered together, or commissioned to supply examples of their work (say, by the State) for any international exhibition in which the Government interested itself, there would be a means of showing what the British potter could do. It is not the expense alone that deters the manufacturer from producing a pièce de resistance, nor the difficulty of finding a market, but the diversion from his ordinary methods, with the resultant loss of time. It would be easy for the Government, on the report of its commissioners and jurors, to select certain firms, to moderately subsidise them or commission them to make exhibition pieces or services (as was done at Sèvres and other historic potteries), and to exhibit not as a private firm or combination of firms, but as the State itself on behalf of the national industry. This would be an inexpensive (and possibly even remunerative) means of developing the best phases of the ceramic industry, and certainly under such conditions Great Britain would hold its own in competition with the rest of the world.

"Militants" and Glass Manufacture.—At St. Helen's business has been unusually brisk owing to the exploits of the militant suffragists, says the "Yorkshire Daily Observer." The plates that "The Wreckers" destroy are not of the sizes commonly kept in stock—they are too big. In fact some of the orders given recently have been for plates of such extreme dimensions that they could not be sent by train, as they would not go under the bridges. It has been found necessary to forward them by motor vehicle to Liverpool and send them round to London by ship.

ROUND THE POTTERIES.

(BY A "POTTERY GAZETTE" REPRESENTATIVE.)

JOHNSON BROS. (HANLEY), LTD., Stoke-on-Trent, are still "going strong." Every year sees some enlargement on one or other of the factories, making increased production possible. Last year, in spite of coal strike stoppages, the output exceeded all previous records. The firm's explanation of the demand which causes this activity is their satisfaction of all customers, thus ensuring repeat orders. In pursuance of their enterprising policy they have brought out a new shape which they consider to be easily ahead of all its predecessors, excellent though these undoubtedly were. A full service has been modelled en suite, and the covered pieces especially are strikingly handsome. The pieces illustrated give a slight idea of the richness of the design, but this can only be properly realised by a view of the ware itself, in the plain white or in a white and gold decoration. "Chantilly" is the name that has been given to this new shape, and already they find it bids fair to prove the very best seller that they have yet placed on the market. There is still a very strong demand for the improved plain shape, the Westwood No. 2, so a range of new decorations upon this shape has given it a place among the leading lines for 1913 trade. Of the designs shown upon the "Chantilly" model, the "Newton A" pattern, with gold edge line and half solid matt gold handles, is also seen in our illustration. This is an exceedingly smart decoration made up by a border of green leaf-work with ornaments in black outlined with grey. It is a most artistic combination, and one that must appeal powerfully to any person of discriminating taste. The "Lonsdale" patterns, one with pink and another with blue for predominating colours, have a spray-border design, and are already in favour as open-stock lines. The "Camden," a pattern combining pink floral treatment with black ornaments, is very effective and striking, yet in distinctly good taste. A narrow rose border called the "Florentine" is very neat and dainty, and the appearance is decidedly enhanced by a gold line traced round the revers inside the embossed panels. The "Chantilly" shape lends itself particularly well to white and gold treatment, and in this style the "Columbia," "Clifton," "Newburg," and "Pembroke" are examples of the highest skill in applied design. These are variously finished with traced handles and half-solid matt gold, and the latter form of treatment completes a very rich and chaste appearance. On the Westwood No. 2 shape the "Cauldon" pattern, shown in our illustration,



[*Photo. by "The Pottery Gazette."*

JOHNSON BROS., HANLEY, LTD.



JOHNSON BROS., HANLEY, LTD. [*Photo. by "The Pottery Gazette."*

is excellent. The broad panels are composed of delieate shades of pink, blue, buff, and green, so skilfully blended that the somewhat heavy design appears light and unobtrusive, thus presenting a eharming ensemble. The "Cyril" is another combination of pinks, with a blaek hair line, and at once seeures unstinted approval. The "Eugene" and the "Caspian" show a very uneommon assoeiation of dark reddish-pink flowers with a slight conventional border in black and amber. These two are probably the most artistic and advanced of all the transfer designs exhibited on this shape. The "Lowell" is an adaptation of the key border style, in light green and red eolours, but with the pattern running in the eentre of the rim instead of at the edge; a gold edge line gives a looks like white enamel, but is in reality the white body of the ware. A gold edge finishes the decoration, which is indeed remarkably choiee and elegant. The "Henley" is a "jasper" style border print, done in Imperial blue and apple-green, with a double gold line, and has already met with great suecess. There are also some new toilet deeorations on show, notably the "Liberty," "Grenadier," and "Bouquet" on both tall and low shapes, as desired. The last mentioned is also illustrated. I notieed on my recent visit that at the Trent Works of this firm, at which are made their famous "Trent" sanitary wares, building operations were in progress, and learned that to the 16 ovens already in full work they were adding five more, with workshops, &c., to correspond.



WM. ADAMS & CO., TUNSTALL. [*Photo. by "The Pottery Gazette."*



WM. ADAMS & CO., TUNSTALL. [*Photo. by "The Pottery Gazette."*

completely finished appearance. The "Carlton B" is a narrow border with dark blue panels relieved by small flowers in green and pink, and the resultant effeet is very rich. Of the white and gold designs the "Warwick" is the most noticeable; it eonsists of a matt gold line and a black hair line on either side of a narrow white band which

WILLIAM ADAMS & Co., Greenfield and Greengates Potteries, Tunstall, permit us to illustrate nine pieces in their famous "Shakespeare" pottery; the deeorations are very finely engraved from the best pietures, eleven subjeets being available. These decorations are also applied to all manner of useful and ornamental pieces,

amongst which the writer saw vases, candlesticks, teapots, jugs, loving cups, mugs, beakers, plaques, plates, cups and saucers, trays, trinket sets, &c. The "Shakespeare" decorations can also be applied to dinner and toilet ware. The subjects of the pictures are slightly tinted in colour under the glaze, resembling the old coloured prints which are so much sought after, and the specimens are finished with lustre and coral borders, giving a charming effect to the whole. Other pictorial designs which the firm satisfactorily produce are scenes from the works of Charles Dickens, and Blackmore's "Lorna Doone." The firm has many new patterns in dinner and toilet ware. Their "Medallion" pattern, shown in the photo, is charming, especially in their reproduced "ivory body." It looks remarkably well in golden brown and claret brown prints, finished in gold, whilst it is also produced in flown blue, flown green, canton, and other colourings. The firm have many beautiful suites in their semi-porcelain and ivory body in toilet and trinket sets, trays of all kinds, sweetmeat dishes, cucumber dishes, fruit dishes and bowls, dessert-ware, teapots, jugs, flowerpots, vases, &c. We illustrate also a ewer and basin of their newest decoration, "Athena." This is delicately shaded in grey and fawn, the former predominating, and enamelled jewels constituting the finishing touches. Messrs. Adams are still producing their old enamelled patterns in dinner and toilet ware, punch bowls, bulb bowls, flower and rose bowls, and a host of other articles similar to the "Shakespeare" ware already referred to. Their old blue scenery printed ware, a reproduction of the firm's oldest pattern, "Cattle," is well known to the trade, and always a good seller. It is certainly interesting to remember that the firm's predecessor, William Adams, was the first to attempt copper plate printing in Staffordshire, in the year 1775, and that this style of decoration has perhaps done more than any other to make the district famous throughout the world. The firm is still making Jasper ware and Black Basalt, also stoneware in the well-known vitreous sage body so suitable for restaurant use, and ironstone china badged ware. Mr. Wm. Adams and Mr. Percy W. L Adams are the present sole proprietors of the concern.

Elijah Cotton, Ltd., Nelson Pottery, Hanley, intend making a speciality of domestic jars, as shown in our photograph. Previously, they have only made one size, but this has commanded such a ready sale as to induce them to model a full suite, and several of the sizes are now ready, and can be supplied with twenty or thirty different letterings, the engravings for which are available. The cheese-stand we illustrate is of an entirely new and sensible shape, and is of full size. It is only being supplied at present in two styles of decoration, lithographed and illuminated in gold, and lithographed and shaded in various colours. The institution of this shape has already proved a success, although the new stand has only been put upon the market this year. Stool pans have been taken up by Elijah Cotton, Ltd., since last we noticed their specialities, and are now being made by them in five sizes, from 8's to 12's. They have, of course, been supplying commode pans and slop pails for some time, and as stool pans run in the same class, no doubt a good sale will result. It would never do, of course, to notice this firm's goods without a reference to their jugs. When we last referred to the Nelson pottery we believe we referred to the "Jewel" shape, which was, however, at that time only being produced in plain white. In each corner of the photograph this shape will now be seen decorated. The Oriental design shown in the right hand corner has already proved a particularly good seller, though the floral decoration on the same shape shown



Elijah Cotton, Ltd., Hanley. [*Photo. by "The Pottery Gazette."*

in the left hand corner of our illustration is also in good demand. The two middle jugs are of a hexagonal shape known as the "Dart," and now being supplied in a variety of designs. I was shown a large number of these in the warehouse at the time of my visit. The conventional design is supplied principally in flown canton, illuminated in gold, and is extremely effective. The floral design is a wild rose, stippled in gold. The firm is also supplying a wide range of other types of decoration on this shape, which has only recently been modelled.

Barker Bros., Ltd., Meir Works, Longton, manufacture both china and earthenware, and are now showing samples of new and original designs in china tea ware and fancies, and also toilet, dinner and suite ware at their London showrooms (Hunter Bros., 94, Hatton Garden). These new samples are so varied and numerous that it is somewhat difficult to decide which to notice first. The very attractive tea sets one sees on the tables are excellent as to shapes, designs and colourings. The "Ilam" border, of which we illustrate a plate, coverdish, and china tea and saucer, is a chaste pattern, printed in self colours, Wedgwood blue, grey, and various tones of green. The "Flora" and "Lynton" tea patterns are good designs, tastefully enamelled in quiet but effective colourings. The former is shown to the left. Some excellent

John Tams, Ltd., Crown Pottery, Stafford-street, Longton.—I found this firm extremely busy, and was informed that the boom has been continuous. For several seasons they have been working at full pressure, and have found it necessary to add a new wing to their premises, including new casting shops, decorating rooms, and large drying stoves on the most improved plan. The new portion of the factory is fitted with the most modern equipment, whilst the lighting, ventilation, and mechanical means of working are a distinct feature of the extensions. In relation to their productions the firm have a considerable number of new shapes in vases and flowerpots, also three or four new shapes in toiletware. As to decoration, they are still producing designs the steady sale of which proves their attractiveness and popularity. From the pieces I was privileged to see I singled out their 845 design, a pleasing chintz, which is applied not only to toilet ware but also to vases, flowerpots, and, in fact, quite a wide range of articles. The decoration is accomplished partly under the glaze and partly on. Although as yet quite a new design, it has already justified its institution by a brisk demand. Amongst the new shapes of flowerpots should be mentioned the "Roma," which is one of the very latest. It is a well modelled shape, of good size, and it comes out



Barker Bros., Ltd., Longton. [*Photo. by "The Pottery Gazette."*

styles of decoration are also to be seen on the "Eton," "Queen Anne," "London," and "Dorothy" shapes, both in enamelled and litho border styles, the prevailing type of the moment. The range of toilet services for this year constitute in themselves a selection to suit all tastes. The "Savoy," which we illustrate to the right, will commend itself by the excellence of its form, being a well-modelled ewer. The decorations have been carefully chosen in keeping with the shape. The "Clyde" toilet also illustrated, at the left of the photo, is a smart shape, and in art shadings and gilt makes a most attractive set at a price which will commend it. The firm have made a special line of their plain art shape toilets, in solid grounds and shades. The colours used are delicate, and a special feature of these toilets is the brilliancy of the glaze, giving to the deepest shades of colour a soft and velvety appearance. The "Carrara" suite ware is a tasteful all-over decoration with colour edge and traced handles. Samples of suite ware, flower pots, clock sets, fruit trays, jugs, teapots, rose bowls, &c., are shown in good variety. Barker Bros., Ltd., are able to supply many of their best patterns to match either dinner ware or china tea ware as required. Buyers will do well to call at their London show-rooms, or to see their country representatives at the stock-rooms of the principal provincial centres and towns regularly visited during the year.

at a moderate price. In vases should be mentioned their 832 decoration, which shows a softly painted rose on a fawn salmon ground, the neck of the vase having been allotted an olive green finish. The rose, coming out as it does with a somewhat darker effect than the ground, gives a pleasing and harmonising appearance. Their 847 toilet pattern is also something entirely new. The shape is hexagonal, and the decoration chosen for it is dealt with in a variety of ways, giving a choice between a moderately heavy and an extremely light finish, the lighter types having apparently been preferred by the artist for this particular decoration. The foundation of the design is an underglaze print in a delicate shade of green, with a border of pale mauve, this being continued also down the handle. The print itself is of flower festoons, and this is coloured by hand with pleasing effect. The firm have several new shapes in set jugs, which are produced at a very moderate price, and amongst these the "Ivor" shape, which is only just out, bids well to become included in the list of successes.

Alfred Meakin (Tunstall), Ltd., Royal Albert and Victoria Potteries, Tunstall, have recently made large additions to their already extensive buildings, and amongst the many improvements and extensions one of our representatives had the pleasure of being conducted through one of their new decorating shops, which for size, healthy

surroundings, and adaptability to its purpose is probably unrivalled throughout the Potteries. We reproduce two views of this room, prepared from special photographs. The firm, whose productions have a world-wide reputation, was established so far back as the year 1873 by the late Alfred Meakin, who very soon won a unique position in the American trade, for which he especially catered, and made his name famous for the excellent quality of his white granite and decorated goods. After his death the business was carried on by his son Alfred J. Meakin, whose early death came as a shock to the trade. Fortunately, at this critical crisis in the history of the firm, it



ALFRED MEAKIN (TUNSTALL), LTD. [*Photo. by "The Pottery Gazette."*



[*Photo. by "The Pottery Gazette."*

NEW DECORATING ROOM: ALFRED MEAKIN (TUNSTALL), LTD.

passed into the hands of that prince of potters, the late Robert L. Johnson, and is now under the active management of his sons, who received their commercial and technical training in the largest ceramic concern in the world. The management is thus marked by youthful vigour and experienced knowledge of the trade. To catalogue fully the many beautiful designs produced by this firm would tire our readers, but we cannot help mentioning one or two. The first thing which attracts attention is the wonderfully successful way in which the firm has been able to deal with that most difficult of colours mazarine blue. To see a huge warehouse practically filled with goods in this favourite decoration was a sight indeed. They have named it the "Bleu de Roi," and a more suitable appellation it would be hard to find, for, with its deep rich tint and beautifully velvet surface, the decoration is one of truly regal splendour. Besides the usual embellishment of gold lines, they do a variety of uni-coloured and multi-coloured borders, all of them harmonising beautifully with the mazarine band, and making very rich and telling effects. An illustration of one of these accompanies this article. We also show another decoration, very simple in design, but very telling in effect, consisting of a decoration in the new matt gold and a border something after the manner of the well-known key border. An illustration in black and white does not, of course, convey anything like a full idea of the effect of this combination, which has to be seen on the ware to be appreciated. There are many other effective designs, and, what is perhaps more important to the dealer in bulk lines for which the firm especially caters, the quality and finish of their white goods is very remarkable. Samples of all these can be seen at their London showrooms, 25, Holborn Viaduct, where their courteous representative, Mr. Ernest Dean, is ever ready to welcome buyers. The impression left on a visitor to this extensive works is that he has been round one of the most go-ahead and up-to-date establishments in the ceramic industry.

Mr. Thomas Poole, Cobden Works, Longton.—We have often noticed previously the wares of this old established Longton concern, which specialises in tea sets, breakfast sets, trinket sets, moustache cups, and saucers, and after-dinner coffees and saucers, and of which a well selected assortment of samples can always be seen, either at the showroom of the factory or at 91a, Hatton-garden, E.C., where Mr. A. Hodgson is in attendance. A number of new designs are now showing in simple prints, enamel colourings, and brands of various colours, with suitable gilt finishes. Mr. Poole has recently got out some new illustrations, and if it is not convenient for buyers to visit the rooms, they should certainly apply for these illustrations.



[*Photo. by "The Pottery Gazette."*

New Decorating Room: Alfred Meakin (Tunstall), Ltd.

Wildblood, Heath & Sons, Peel Works, Stafford-street, Longton, allowed me to take particulars of five teacups and saucers, which are all quite new this year, and are selling well. This firm has a very wide range of tea patterns, and offers excellent patterns at very moderate prices. The patterns we reproduce are all excellent value, and are of the right type to find popularity, both from the point of view of style and value for money. The "Windsor" shape has been brought out for 1913, and is shown in the centre of our photograph with a festoon design, which is printed on the glaze and enamelled, and looks very dainty. At the left hand top corner is illustrated the "Low Victoria," 1,671 pattern, which is treated in Crown Derby style, filled up under the glaze with mazarine blue, and "cut up," giving a very rich effect. At the right hand top corner is shown the "Low Victoria," 1,672, a festoon pattern, double printed, first



WILDBLOOD, HEATH & SONS, LONGTON. [*Photo. by "The Pottery Gazette."*

in underglaze black, afterwards enamelled in colours, and stippled in gold on the black. At the bottom left hand corner the "Tall Victoria," 1,674 design, is shown. This also is treated in Crown Derby style. At the bottom right hand corner will be seen the "Tall Royal," 1,695, which is printed under the glaze, and coloured and gilt Derby style. All the patterns are well handled, and are such as will appeal to a wide market.

HAMMERSLEY & Co., Alsager Pottery, Longton.—Calling upon this well-known firm, I was pleased to have the opportunity of inspecting a range of their high-class wares in a thoroughly well utilised if rather small showroom. It is quite unnecessary to say that Hammersley & Co. have a good general home trade, and they also have a fairly extensive connection overseas, particularly with America. They are responsible for some first-class productions, and some of their decorations would do justice to firms of much larger magnitude. I was given every assistance in taking particulars of a few of their newest lines, and am permitted to reproduce a photograph taken in their showroom of a group of pieces representing some of their regular lines. It will be seen that the photograph includes a wide range of articles, i.e., dessert



[*Photo. by "The Pottery Gazette."*

HAMMERSLEY & CO., LONGTON.

ware, tea and breakfast ware, teapots, vases, &c., as well as an assortment of nursery ware. Hammersley & Co. are also large makers of badged wares for hotels and restaurants, and have a really good trade in this connection. The vase shown at the left hand of the illustration is a magnificent piece. It is of Chinese shape, and the decoration consists of a mazarine blue ground, with a richly painted panel, the whole being relieved with a buff and gold treatment. The vase at the right hand side is of the same shape, having blue panels, enclosing an Oriental design. The eight dessert plates illustrated are principally of dark blue, with hand-painted flowers, &c., and these pieces are most tastefully handled by the artists. The "Empire" shape chocolate cup and saucer shown in the centre of the illustration is of raised gold decoration, with a painted wreath below. Quite a large quantity of such pieces are exported by Hammersley & Co. to America. The teapot, teacup and saucer, and coffee cup and saucer shown at the left side of the photo. are intended to illustrate a reproduction of the old Dresden sprays, and are treated in enamel colourings, but it is very difficult, of course, to get anything like the real effect in black and white. The teapot shown at the right hand side also shows a richly raised gold design, having a painted wreath below. The two vases on the second row are reproductions of Swansea and Bristol decorations. The cup and saucer in the centre at the bottom of the illustration shows a violet design, of which Hammersley & Co. have the sole rights, and which, I understand, for several seasons has proved an extremely good seller. It will also be noticed that our illustration includes several lines of nursery ware, which is being extensively made by this firm. The firm are also doing a good range of teapots of different patterns. Amongst these a sweet pea design in a violet shade has taken on very well. Hammersley & Co. do a good trade in china dinner ware, trinket sets, afternoon tea sets, &c.; in fact, they make a very fine and wide range of goods. I was much impressed with the artistic merits of many of the pieces I was privileged to see. The firm's London representative is Mr. John Jenkins, 32, Ely-place, E.C., and their country representative Mr. F. Adderley.



MR. J. W. BESWICK, LONGTON. [*Photo. by "The Pottery Gazette."*

MR. J. W. BESWICK, Gold-street Works, Longton.—It is principally as a manufacturer of earthenware in wide variety that Mr. Beswick has been able to build up an extensive medium class trade, and it would be correct to say that he caters for the million. At the present time he is making quite a speciality of vases, having decided evidently to take up this line more actively than hitherto. Toilet sets, jugs, teapots, and general domestic lines he has always made in great variety. Not only, however, is Mr. Beswick a manufacturer of earthenware, but he has a separate works devoted entirely to the manufacture of china. This latter department it is not my intention to speak of at this stage. By the courtesy of Mr. Beswick, I am allowed to show a number of his principal lines, and everything shown in the illustration, with the exception of the centre ewer and basin, is entirely new, the shapes being modelled only since the conclusion of last season. The clock set shown to the left has a blue ground, with painted game figures, stippled off in gold. No less than four sizes of clock sets can be had, and in a variety of decorations. The teapot and stand illustrated can be supplied in shaded grounds and with litho design and stippled gold finish. The salad bowl is made in four

sizes, the decoration chosen for our photograph being a shaded ground, with litho and gold finish. The vase to the left hand of the photograph is of the "Aden" shape, with pattern 2,416, aerographed, painted and gilt. The one to the right is of the "Alexandra" shape, and is decorated with various grounds—blue, bronze-green, fawn, &c.—as desired, and litho bird centre, gold stamped and handles gilt. The flowerpots are of the "Douglas" and "Fulham" shapes, the former being made in five sizes, and the latter at present in only one. The "Fulham" shape is shown to the right, and the piece in the photograph shows an underglaze shaded and painted design. The "Douglas" is dealt with in a somewhat similar way. The decoration of the latter shown in the illustration is the "Iris," but the patterns are interchangeable to the various shapes. The vase and stand is of the "Aden" shape, following the left hand side vase already referred to. This is made in three sizes. This "Aden" centre is also made in the form of flowerpots, that is to say, without the cover, foot and pedestal. Mr. F. J. Bennett, Gamage-buildings, Holborn, E.C., is Mr. Beswick's City representative.

NIGHT LABOUR OF BOY GLASS WORKERS.

IN the quarterly report of the National Flint Glass Makers' Society is printed the text of a communication sent to the Home Secretary on the subject of the employment of boys at night in the flint glass trade. The memorandum says :—

"It is the deliberate opinion of the undersigned (chosen representatives of the Manufacturers' and of the Flint Glass Makers' Society) that if these recommendations become ratified by Act of Parliament, the industry will be so seriously crippled that it will become impossible to carry it on under the new conditions, and in consequence a large number of operatives will be thrown out of employment.

"It is also our opinion that these recommendations, besides being injurious to the trade as a whole, would be most unfair to the boys for whose benefit they are intended, as they would debar them from the opportunity of learning their trade at the most receptive age, which would seriously handicap them in after life, and result in a large percentage never emerging from the lower grades of glass making.

"The flint glass trade—which is quite distinct from the bottle and sheet glass trades—is an industry calling for the highest possible skill and training in the glass makers employed, and such training can only take place in the glasshouse, where everything necessary for learning the technicalities of the business, including the most experienced teachers, is at hand. Flint glass making is a handicraft which takes years to master, and necessitates boys starting at an early age, when they are most amenable to teaching, and when their faculties are most capable of acquiring the desired skill of hand and eye, on which their future livelihood will depend.

"The conditions at present prevailing are as follows :—The men and boys engaged in the glasshouse work in two sets (or 'turns') of six hours each, with an interval of six hours' rest between each spell of work. Half-an-hour is allowed for meals in each turn of six hours. Eight turns constitute an ordinary full week's work of 48 hours, or, allowing for meal times, 44 hours actual work. The boys are at work during part of four nights in the week; the remaining three nights and days they are not at work.

"Evidence was laid before the Committee that boys in the flint glass trade are, as a rule, strong and healthy, and fully up to the physical standard, and compare in this respect favourably with boys employed in other branches of the trade. Statistics were also given proving that the glass makers are a remarkably long-lived set of men, the average age at death recorded by their society being about 70 years.

"It is a matter of common knowledge that boys who are under-sized and of poor physique when starting work improve rapidly in appearance after the first few months, owing to the healthy conditions of their employment, and the better nourishment which the wages they receive enable them to secure.

"If the first recommendation of the Committee is acted upon, and they do not start work until they are 16 years of age, they will be compelled to find temporary work during the two years after leaving school, which, besides being in all probability less remunerative, will be most likely to unfit them for their future occupation.

"The second recommendation, namely, 'That night work for boys should be illegal for a longer period than a week at a time,' is quite impracticable, and would cause the utmost confusion and loss of work to men and boys alike, as it could not be made to fit in with any existing schedule of working hours.

"The Committee, in another part of their report (page 11), express a preference for eight hours shifts worked by three shifts of men and boys. If a 48 hours week is to be made by each set, this would involve one of the sets working through the night on six consecutive nights, thereby greatly increasing the night labour which the Committee are so desirous to curtail. Such an arrangement would never be submitted to by the flint glass makers in this country.

"While we desire to enter a most emphatic protest against the opinion expressed on page 16 of the report—that the flint glass trade 'is not so hand pressed as formerly by foreign competition and better able to contend with it,' we unreservedly endorse the views of Mr. Waldorf Astor in the memorandum which bears his signature, namely: 'That the recommendations, as regards the glass trade, ought not to be carried out until a more detailed inquiry has shown that the trade can stand, in the face of foreign competition, the increased cost which the changes recommended would entail.'

"Before effect is given to the Committee's recommendations, it is our earnest desire that 'a more detailed inquiry be made into the special conditions governing the flint glass trade.' We desire this not only on behalf of the manufacturers and glass makers, whose representatives we are, but also in the interests of the many hundreds of glass cutters, decorators, and others whose means of livelihood would be seriously menaced if these restrictions were ever to be imposed.

"We may add that we have the unanimous support of the whole of the flint glass trade, including every branch of the makers, glass cutters, and others, in condemning the Departmental Committee's recommendations."

The memorandum is signed by three masters and three representatives of the men's society, namely, Messrs. J. Silvers Williams-Thomas (chairman of the committee), W. H. Stuart, and Congreve Jackson (masters), and Messrs. Joseph Bell (president of the men's society), John Husselbee (general secretary), and W. Bradford (financial secretary).

The Earthenware Export of Austria-Hungary amounted last year to 83,688·6 metric tons, including 17,196·7 m. tions classed as porcelain. Each total shows a moderate increase.

THE HISTORY OF A VASE.

(SPECIALLY CONTRIBUTED.)

ONE of the most interesting features in the making of pottery, wherein it differs from so many modern products, lies in the fact that in the space of one manufactory are carried out all the many processes necessary for the translation of the raw material, as it comes from the earth, to the finished product ready for sale. Those who know not the way of the potter might conceive that this was not a very intricate or complicated matter. You take a lump of clay, form it into a plate or vase, fire it in an oven, and the thing is done. As a matter of fact it is probable that, so far as the majority of users of pottery are concerned, that is the extent of their knowledge of the potter's art. The sheet we issue with this number, with a little explanation will, it is hoped, enlist a little more interest in the way in which a handful of mother earth is translated into a substantial and enduring object of use or beauty. It illustrates (1) the raw materials, (2) a vase as it leaves the thrower's wheel, (3) the same vase ready for the oven, and (4) the vase finished, decorated, and ready for the embellishment of the home.

To say that ordinary plates and dishes are not made of clay alone will come as a surprise to the uninitiated, but such is the case. Of the four standard ingredients depicted at the foot of the sheet two only are clays. The first (counting from left to right) is china clay, of which our supply is exclusively obtained from Cornwall. The next is ball clay, mined in Dorset and Devon mostly. The other two are Cornwall stone and flint pebbles, the latter being furnished principally from the seacoast of one district of France. These, it must be understood, are by no means the only materials that are employed. To give a full list of all the ingredients of modern pottery would be only confusing and tedious. It will be sufficient for our purpose to indicate these four, which form the principal or basic constituents.

The great cause of the many difficulties that it has taken centuries of experiment and research to overcome is to be found in the great heat to which these materials have to be subjected to transform them into presentable and serviceable pottery ware. Under this heat the vagaries of different species of clays and minerals are extraordinary. One will split asunder, another twist itself into grotesque shapes, another crumble to dust, another form a hard impermeable mass, and so on. Some contract to a remarkable degree, others scarcely at all. It will thus be understood that only by a judicious blending of these and other materials can a white, substantial, and durable article be produced.

These matters being properly adjusted, and the resultant clay mixed and ready for use, the thrower's wheel comes into operation. The requisite weight of clay for the vase depicted is literally thrown on the round slab attached, and under the thrower's hand arises, as if by magic, the vase as shown on the left of the plate. Note the ridges and hollows left by the thrower's fingers. When dry enough to admit of handling without destroying its contours, the turner takes it in hand, and on his lathe takes away all the roughness and reduces its proportions to the exact size required. Not, it should be noted, the exact size of the finished article; the contraction due to the ensuing fire has to be carefully allowed for. The scroll feet having been pressed in a mould to the required shape, are placed in position, and the vase when thoroughly dry is ready for the oven.

The process described is, of course, not the only method by which such articles are made. In some the clay is pressed into plaster of paris moulds of the required shape and afterwards smoothed and trimmed. Or ware is cast by pouring the liquid clay into the mould and allowing it to harden. In these the element of skill and handicraft is reduced to a minimum, but where shapes other than round or with embossed ornament are required, some such processes are indispensable.

Having passed through the ordeal by fire successfully our vase is by no means complete. It emerges from the oven porous, dry, and rough to the touch. The next process is to cover it with a coating of glass—or glaze, as it is termed—and again subject it to a great heat. Herein fresh difficulties arise. Unless the glaze is in all respects suitable to the nature of the "body," as it is called, the fire will play sad havoc with it. It will crack, craze, form a multitude of little eruptions, run all to the bottom of the piece, or form into little islands and continents, or be dull, or rough—in fact, do anything but what is required of it, that is to say, spread evenly and form a velvety and transparent gloss all over the surface.

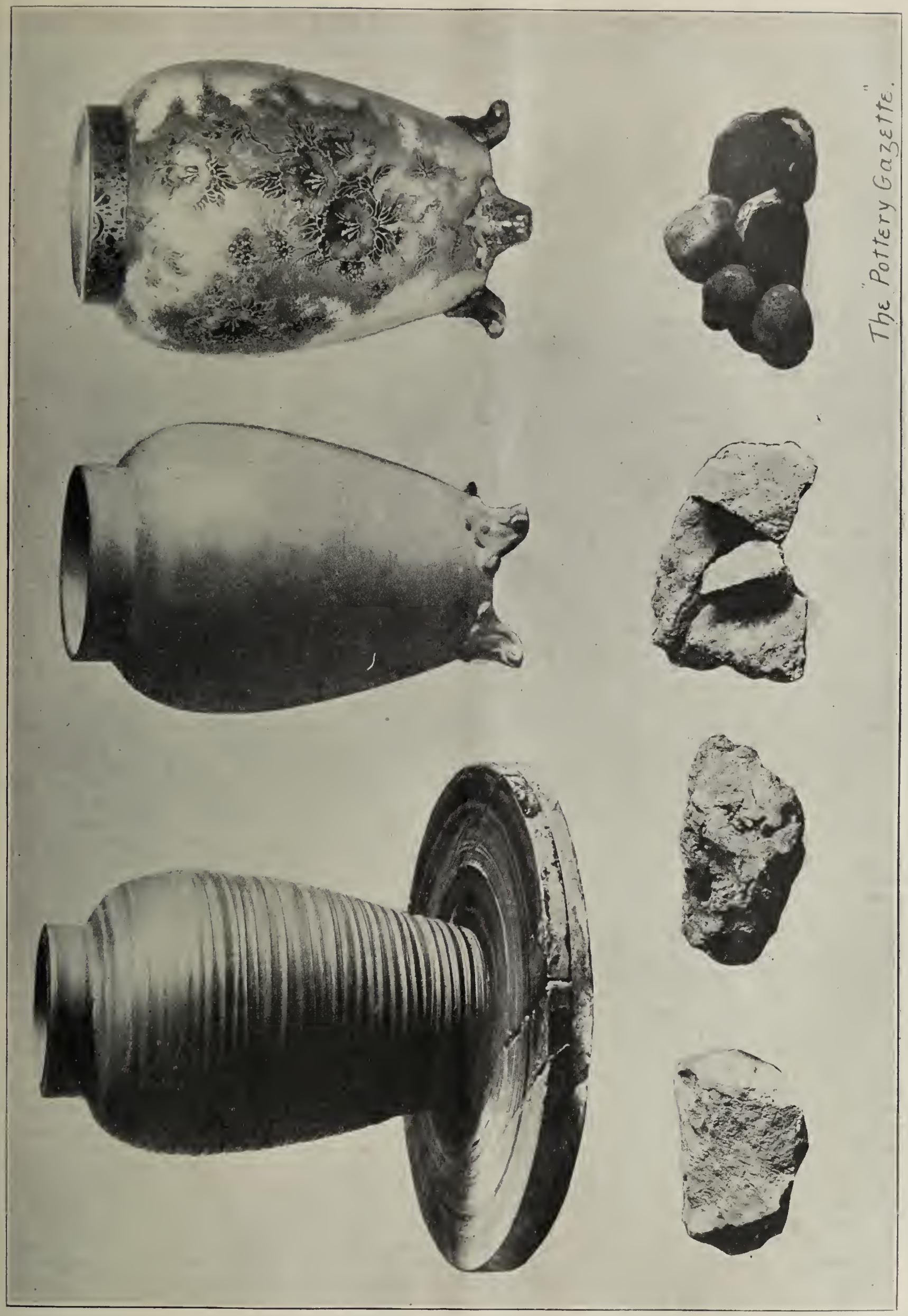
If our vase passes through all these dangers and difficulties of its birth and infancy, and there are many not enumerated here, it is ready for the decorator's hand and fancy, and has to pass once, twice, and often three times again through the fire, but of a much more moderate character.

It would thus seem that the wonder is, not that the market should be flooded with reliable articles of all sizes and shapes, but that any should survive the dangers and trials of their manufacture at all. However, the experience and experiments of generations of potters have minimised the risks of failure as far as is humanly possible, but there still remains incessant care and watchfulness throughout all the processes involved in order that inordinate loss shall be prevented and commercial success achieved.

We are indebted to the kindness of Wiltshaw & Robinson, Carlton Works, Stoke-on-Trent, for affording the facilities for the production of our interesting plate.

Folk Songs and Lead Poisoning.—At first sight there does not appear to be much connection between these two subjects, unless it be said that much of what has been written about lead poisoning is "not worth an old song." The heading, however, refers to the fact that on March 5, Mr. Clive Carey gave a lecture at 25, Bolton-gardens, South Kensington (by permission of the Misses White) on English folk songs, the proceeds of the lecture being devoted in the Potteries fund to assist women and girls suffering from lead poisoning. Mr. Carey gave some interesting examples of old songs and ballads, and Miss Constance Smith, who presided, made an appeal on behalf of the Potteries fund. Among the lead workers, she said, were 2,361 women and children, and the suffering from lead poisoning was still very serious.

Russian Glassworks Congress.—At the Glass Makers' congress which closed at Moscow on March 17, the approaching unification of the Russian and Finnish customs systems was referred to with apprehension, owing to the natural advantages at the disposition of the Finnish glass makers in the form of cheap fuel and water power. The Congress accepted the conclusions of the report by S. L. Gurievitch on the desirableness of having a special school for glass technology. There are 251 glass works in Russia, employing 55,000 hands, with an annual wage disbursement of 13,800,000 roubles; and the need for a technical school is felt to be the more urgent, as the lower ranks of technical assistants in the industry are very ignorant. A proposal to raise the price of bottles for the Government liquor traffic naturally met with a sympathetic reception. It is proposed to transfer the bureau of the Congress to St. Petersburg so as to be within easier reach of the Government when questions affecting the industry come up for discussion.



THE HISTORY OF A VASE.

SOME CHINA SHOPS IN BRISTOL.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

IT is hardly necessary for me to advance an excuse for a desire which I recently felt to take a run round Bristol in order to obtain a few particulars with regard to some of the principal businesses there connected with the sale of the goods in which this Journal is interested. It is well known, of course, that Bristol is not only a city of important proportions, but that it boasts of many early historic associations. It was already a large and flourishing settlement in the latter part of the tenth century, and, although its definite historic chain seems to commence with the reign of Ethelred the Unready, some historians have sought to trace it much further back than that, indeed as far back as the year 980. Anyhow, its early maritime progress gave Bristol a place in the front rank of British cities, and though it may have lost the position it once held, as second port of the kingdom, and some of the prestige it formerly enjoyed in matters of shipping (which it is now trying hard to regain, and probably will regain by the recent construction of large docks at Avonmouth), it is certainly a city of sufficient importance commercially and industrially to have earned for itself the title of the "metropolis of the west." It is universally felt that Bristol's importance, although at present great, will increase rapidly in the future, for the city authorities are now alive to their necessities, and the acquirement of the new docks at Avonmouth and Portishead, at a capital expenditure of over six million pounds, will, it is felt, do much to regain for the city a good share of the international shipping which was formerly enjoyed and lost to other ports of the kingdom.

Modern Bristol, with a population of 385,000, an area of 17,000 acres, and a rateable value approaching two million pounds, apart altogether from its importance as a shipping centre, holds a world-wide reputation. It has a number of really important industries, on which, however, I am reminded I must not touch. One would, therefore, naturally expect, when being deposited in the city, to be in an unique position to write up some very interesting matter with regard to the china shops. I must, however, preface what I have to say hereafter with the admission that I was to some extent disappointed, not by any means with the establishments I saw, but those that I did not. It was a regrettable discovery to me on my tour around Bristol that the trades with which we are concerned have been allowed to develop into channels which one would only expect to be utilised in the smaller market towns which have either not sufficient commercial importance or a sufficiently large population to warrant the reservation of the sale of earthenware, china, or glass to dealers having bona-fides in that direction. It is certainly regrettable to see in a city of the proportions of Bristol so many "dabblers" and so few businesses having been able to establish and develop an exclusive trade, or at least an exclusive department. To those who have been able to do this in spite of the tendency on the part of certain manufacturers to extend their selling rights—a tendency especially noticeable in the vicinity of Bristol—I offer my hearty congratulations. I certainly do think that with a greater measure of co-operation between manufacturers and dealers, our china shops in certain districts, and notably Bristol, would assume a greater importance, and as a result there would be a better living for both. In making this observation I am not speaking with the authority of, or on behalf of, the Editor of this Journal, but merely giving expression to a personal view formed as the result of observations made in a number of districts, and peculiarly in the neighbourhood of Bristol and suburbs.

Travelling overnight and arriving at Temple Meads Station shortly after daybreak, I had several hours to while away before getting to business, and I took advantage of the time to get out to Clifton, and there view the surrounding country and take my bearings from the famous suspension bridge. It is no part of my business in these notes to describe the scenic merits of the towns I visit, but may I just say that I was altogether agreeably impressed with the situation of the city. The wooded gorge of the valley of the river Avon, as viewed from the rocky heights of Clifton, is picturesque indeed, and one has seldom the advantage of such scenery in close proximity to a city of such magnitude. One's first impression is that one is out for a holiday rather than a business trip. I was, however, quickly disillusioned, for by the time I got round to the shopping centre of Clifton I found the business people astir, and early in the morning was able to make my first call in that fashionable residential suburb, the most important suburb of Bristol, divided from Bristol proper only by a short stretch of suburban road and semi-detached villas, yet of sufficient importance to constitute a township of itself.

MUNDY & Co., 5, Royal Promenade, Clifton.—One would judge from a short stay in the vicinity that there is nothing for which the Clifton resident need journey to Bristol proper. Certainly he is well served in the establishment of Mundy & Co. Before entering the shop I stood for a while outside to take in the general situation. The pillared double front of the shop is thoroughly in keeping with the other high-class premises on either side, and evidently the trade is of the best possible class. I was hoping to have been able to see the present proprietor, Mr. A. J. Goodwin, whose acquaintance I made many years ago in the Staffordshire Potteries, and with which district he has been identified, I believe, between his travels, throughout his life. Many in the trade will, of course, recognise Mr. Goodwin as the late genial and respected representative of Messrs. George Jones & Sons, Crescent Potteries, Stoke-on-Trent, from whose service he retired only quite recently, after, I believe, forty-seven years' attention to their interests. Unfortunately for me Mr. Goodwin, senr., was enjoying a brief respite along with his wife at Bournemouth, but I was well received on entering the shop by Mr. C. H. Goodwin, his son, who did not hesitate to give me a few interesting facts in relation to the position of the business past and present. In the course of conversation I learned that the business was established about the middle of the nineteenth century by the late Mr. T. G. Mundy, at which time two separate shops were independently conducted at 9, Clare-street, and 37, Park-street, respectively. After trading for some years that gentleman decided to enter into a partnership arrangement with his brother, Mr. James Mundy, and his nephew, Mr. Thos. Mundy, from which time the business progressed under the style of Mundy & Co. A reorganisation subsequently took place, Mr. James Mundy retiring from the business, and the founder and his nephew continuing under the same name until 1880. Mr. T. G. Mundy died and left the business to his partner, who disposed of it in 1897 to Mr. J. F. Phillips, of Exeter, by whom it was carried on until the year 1905, when it was purchased by the present proprietor. From that date it has been conducted by Mr. Goodwin, with the aid of his two sons. I was quite pleased with my inspection of Mundy & Co.'s premises, the interior of which is quite as imposing as the exterior. The general arrangement of the premises appealed to me at once as being satisfactory in the extreme. There are three rooms, all on the ground floor, which have

been so converted as to form one spacious showroom, having three separate sections, these sections only suggesting themselves by the position of the wall of the original rooms. Round the section at the rear runs a gallery, having a large glass dome, and this gives a reflective light which should be extremely useful in the effective display of such high class goods as the firm is able to handle. The three sections of the showroom are taken the utmost advantage of in the direction of classifying the different lines handled. The front section is used more particularly for displaying the better class fancy goods, and amongst which there was an excellent showing of Crown Derby, Worcester, and other richly decorated lines, all invitingly placed, and intended evidently to tempt a prospective customer to the middle and rear sections, should he find nothing to suit his pocket towards the front of the room. A fine line of Crescent rose bowls caused me to make a special note, though it would really be invidious for me to attempt to single out odd lines from such a magnificent assortment and shown to such marked advantage. The middle portion of the room is used particularly for the display of glassware, and there was an equally good show of cut glasswares, of which the firm are evidently making a speciality. Tea, dinner, and dessert ware is confined to the third or back section, and the gallery surrounding this rear section is mainly used for showing toilet ware, of which there is an excellent assortment, both in regard to shapes and designs, some hundreds of different designs being well shown on shelves constructed to give the best effect. A novel way of showing bedroom ware which I noticed whilst in the room was a double form of washstand, so placed that by walking round it one could see two types of decoration displayed on the same piece of furniture, an arrangement for which Mr. Goodwin, junr., I believe, is responsible, and which might be adopted with advantage by others interested in the toilet trade. I was caused to think whilst in Messrs. Mundy's rooms that if only more of our provincial dealers in the trade would give as much attention to the toilet ware branch as is being devoted to it by Mundy & Co., there would be less tendency for this section of the china dealer's legitimate business to fall into the hands of the cabinet maker and the complete house furnisher. The firm is certainly giving customers the advantage of a wide range of selection in toilets, and some hundreds of sets are stocked by them. In the glass department Mundy & Co. are, I believe, sole agents for the district for Thos. Webb & Sons, Ltd., and Stewart & Sons, both of Stourbridge, and it is almost unnecessary to add that after Mr. Goodwin, senr.'s, long connection with George Jones & Sons, Stoke, he acts also as their sole agent. They handle practically all the better class makes of goods. The premises have recently been undergoing a process of adornment in the careful hands of the decorator, and possibly I arrived a little too soon after that gentleman's departure to see the final arrangement of the rooms for the season, but I must say that I was exceedingly pleased with the whole effect, and I have every reason to believe that Mundy & Co. are laying themselves out to retain a premier position in the highest class circles of the trade.

Mr. F. G. Bussell, 34, High-street, Bristol.—Proceeding to Bristol proper, I was fortunate in finding Mr. Bussell at his new premises in High-street, and was delighted to take advantage of his offer to inspect his various rooms. Here, again, the frontage of the shop is unfortunate in not conveying a correct idea of the extent and character of the business, and I have seen shops of far less importance with a larger frontage which would convey the idea of being far larger and more important than they are. Not that Mr. Bussell has not made the utmost advantage of his window space. It is really nicely, effectively, and judiciously employed, but, if I may say so, I consider Mr. Bussell extremely unfortunate in his limited frontage. No doubt that gentleman himself is thoroughly convinced of this disability and recognises the fact better than myself, for he is a keen, shrewd, and capable business man. What, however, Mr. Bussell lacks in frontage to his premises he more than makes up for in his scientific use of the premises above and behind, and the half-hour that I spent with him in walking through his various rooms and inspecting his stock forced upon me the view that he has not only the ability but the business connection which will more than counterbalance his misfortune in front display accommodation.

The premises are situated in a busy thoroughfare, and, I understand, are over 300 years old. They have only been occupied by Mr. Bussell for a few months, but sufficiently long for him to have got everything ship-shape. Questioning Mr. Bussell with regard to the small frontage to such spacious premises behind, he assured me that he considered the place would be eminently suited to his requirements, and I admit that after seeing through the



A Corner of Mr. F. G. Bussell's Showroom.

rooms, and hearing from Mr. Bussell further particulars as to the nature of his trade, I was myself convinced to the same extent. The trade is evidently by no means a passing one, although situated in such a trafficky part of the city; it is really a combination of a better class family trade and a wholesale trade, the latter being concerned largely with badged and catering orders. On the ground floor I inspected a carefully selected stock of saleable lines in a room which, although somewhat narrow, extends back fully 60 ft., and which is so arranged that there is an uninterrupted view throughout. Naturally there is no room for centre fixtures, but this is not a serious disadvantage—in fact, I am not sure that the stock is not seen to better advantage without. On the floor above is the showroom, where a splendid variety of high-class goods from all the principal firms is displayed, Cauldon, Minton, Wedgwood, Worcester, Coalport, Copeland, and Doulton being prominent amongst those I saw. The room contained at the time of my visit an excellent range of best class tea sets, breakfast sets, dessert sets, afternoon sets, trinket sets, and fancy figures. Some beautiful glassware, principally from Stevens & Williams, and Walsh Walsh, was also on view, flower stands and vases for table decoration being particularly prominent.

On the second floor, space is reserved for better class toilet sets, earthenware breakfast sets, tea sets, and sundries, and the top floor, consisting of two separate rooms, serves the purposes of a warehouse, and is fitted up throughout with wooden pens, so that the stock, both pottery and glass, can be kept in perfectly good, clean, and straight order.

Mr. Bussell does a good trade, as I have already said, in badged goods, and even supplies a number of the principal steamship lines. I understand he is the principal agent for the well-known Bristol pottery, and consequently the Bristol art ware is shown by him in great variety. One of the foremost designs on view was by Louis Wain, the famous cat artist, from whose designs Pountney & Co. have produced some excellent lines, and with the sale of which Mr. Bussell has no reason to be dissatisfied.

with another firm in the same city, and is therefore a well-known figure in the trade. His Castle-street business is being transferred to High-street, so that shortly Mr. Bussell, with the able assistance of his wife, will have everything under his personal control.

The photograph reproduced shows the far end of the selling room on the ground floor, with the staircase leading to the first floor showroom. It was somewhat difficult to secure this photograph, seeing that the room, as I have already mentioned, is some 60 ft. long. However, it will doubtless serve to show how effective is the general display, and not only so, but how difficulties can be overcome when one has the determination to surmount them.

Mr. G. Passmore, 4, 6, and 7, Grove-buildings, Black Boy Hill, Redland, Bristol. After leaving the Royal Promenade I proceeded to this old-established business, conveniently



Mr. G. Passmore's China and Glass Shop.

Other series of Bristol art wares were noticed, one of the principal of these being decorated with cock and hen designs, and others with a whole range of various fruits. I was told that some of these patterns have "caught on" exceedingly well, and have succeeded in interesting nobility, the Duchess of Beaufort in particular. The popularity of these designs may be gauged by the fact that a large new hotel at Badminton has been fitted throughout with the Bristol art wares in various styles and designs.

I must congratulate Mr. Bussell on the way in which his new premises are laid out. If he can only by his limited frontage induce people to walk behind into his dainty "parlour," I am sure they will not fail to find something to suit their tastes and their pockets.

I should add that Mr. Bussell was formerly connected

situated on the Black Boy Hill, and was very glad to have the advantage of a personal chat with Mr. Passmore, who is now becoming almost a veteran in our line of business. One at once realises on making his acquaintance that he is a gentleman of retiring disposition, and who has no desire to be dragged before the footlights. He has, however, a genial temperament, and was not averse to entering into a conversation with me which touched upon some very important aspects of our trade. Mr. Passmore certainly does not mince words, and is evidently not in the habit of calling a spade an agricultural implement. He speaks of things just as he finds them, and if only there were more gentlemen of his type in the trade and they would not hesitate to put their views forward, many of the disadvantages now experienced by both dealers and

manufacturers would be got rid of, and the trade all round would be the better for it.

Mr. Passmore, it is interesting to note, commenced business in his present shop in the year 1871, and as he has done ever since its foundation, still controls his affairs personally. He did not purchase the business, but founded it absolutely, and he has displayed marked initiative in bringing it to its present position.

The shop, of which I am glad to be able to show a photograph, is, as will be seen, double-fronted, and enjoys a really good stand, though, unfortunately for Mr. Passmore, one of the best windows of his shop faces Grove-road, having a side aspect. The front windows, therefore, which face the main Whitelady's road and Durdham Downs, do not convey a true impression as to the extent and character of the premises. Here, again, all the stock is carried on the ground floor—a convenient factor in any business—and the rooms, which are not in any way divided, are well fixtured and equally well set out. The business possesses a good family trade, and Mr. Passmore is consequently able to be a customer of some of the best houses, Crown Derby, Worcester, Coalport, Wedgwood, Doulton, and other principal makers being represented in his stock.

Mr. Passmore is nothing if not a freetrader, and although he handles a certain amount of foreign wares, it is solely because he is unable to meet the demands of his clients entirely with British productions. I gathered from the conversation that he does everything possible to encourage the sale of the home-manufactured article, even at an increased price, but, unfortunately, the English manufacturers, Mr. Passmore considers, will not cater for certain special cheap lines for which there is always a demand. It is, he says, entirely a question of price, and were English manufacturers to seriously consider this section of the trade, he is convinced that the sale of foreign goods would be very much more limited than it is at present. In his opinion this is the only and properly effective way of ousting the foreigner from the English markets.

Mr. Passmore carries a good stock, which is of a widely miscellaneous character, and it is evidently his business to try to meet all pockets, as will have been judged from the foregoing. A central stand in his lengthy room is tastefully set out with glassware, flower tubes, epergnes, and general ornamental lines, which are seen to real advantage. The outside of the shop has recently been decorated—the painters have been busy in the china shops of Bristol—and has an attractive appearance. Mr. Passmore is certainly to be congratulated upon the general arrangement. Our photograph shows that he is a believer in a good light to his frontal, and has therefore adopted an arc lamp of some considerable power. The glazed tile arrangement below the windows gives a clean and particularly bright appearance to the front. The side cases, which were almost crowded out of the photograph, contain a well-chosen assortment of small ornaments and local view souvenirs, and are displayed in a manner so as to arrest the attention of the passer-by.

I was exceedingly interested in Mr. Passmore's retrospect of the 40 years or more in which he has been in the china business. During the conversation I received many good pointers which will doubtless be valuable to me at some future date.

I could not help feeling that it was a great pity that Mr. Passmore is not being followed up by anyone in the business he has so successfully run for so many years, but I was interested to learn that he has a son in America who has found a more profitable occupation. Doubtless, however, it was the business acumen and enterprise of the father as a china and glass dealer which provided the son with his opportunity, so that if the sale of china and glass, as Mr. Passmore points out, is not as rapid as that of the commodity sold over the way for "ministering to the interior," it has at any rate enabled him to put his family in the way of picking for themselves. I hope that when I next have the pleasure of visiting Bristol I shall find Mr. Passmore still in harness and still forging ahead.

(To be continued.)

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE March meeting of the English Ceramic Society, which was really arranged in conjunction with the Joint Committee of Pottery Manufacturers, was held at the Stoke-on-Trent Town Hall, on Thursday afternoon, March 13, when Mr. C. R. Pendock, His Majesty's Inspector of Factories, lectured to a record attendance on "Methods of Ventilation and Dust Removal in Pottery Workshops." The meeting had been brought well before the notice of manufacturers generally, together with an invitation to their interested foremen, and for this reason the meeting was considered as an open one. It was not surprising, therefore, that there should have been such a really good attendance.

Mr. W. Burton, M.A., F.C.S., took the chair, and it is interesting to observe that it is just seven years ago since the English Ceramic Society's previous meeting at the Stoke Town Hall, when Mr. Burton was himself the lecturer.

Explaining the circumstances under which the meeting had been called, the Chairman introduced Mr. Pendock, who, he said, had come to them at a very critical time in the affairs of the pottery trade. The new regulations had made it incumbent upon every pottery manufacturer to overhaul his system of ventilation, and to deal with problems of temperature and the removal of dust from the atmosphere, which were considerations of vital importance. Mr. Pendock had, he thought, been wisely chosen by the Home Office for this purpose, because he was an expert on questions of mechanical ventilation and the removal of dust from workshops generally. During the whole of the time that the Lead Commission sat Mr. Pendock was working for them, investigating the various problems encountered, and many of the recommendations of the Commission were based upon that work.

The Chairman proceeded to refer to the reputation which Mr. Pendock had earned in the Derby District, which he had just left. If he was able to satisfy the mechanical engineers of the Midland Railway Company, at Derby, and show them how to improve the ventilation of their workshops, he certainly ought to be exceedingly useful to the pottery manufacturers of that district of North Staffordshire.

Mr. Pendock, on rising, was well received, and expressed his pleasure at meeting an audience of manufacturers and others interested in such numbers. He thanked them for the opportunity they had afforded him of meeting them collectively, as he hoped to do individually later on. He was honoured by their attendance, and honoured in the Chairman. Before getting to his subject, however, he would offer a word of warning. They must please regard the occasion as quite informal, and, therefore, as one not having any official significance. Also, they must please not think because he ventured to address them on the matter before him that he was in any sense a supreme authority on the subject. He made no such claim on his own part, and would like them to regard him merely as one who, having seen a good many things—and many good things—in ventilation, during a long experience, now wished to put before them a few chatty

comments and suggestions without attempting to dogmatise on the subject. They would be in no wise bound by anything he said or suggested that afternoon. He merely wanted to set them thinking, to arouse their interest in what was really a most fascinating study and one that he thought would repay them all enormously if they would only give it the attention it deserved.

A few weeks previous the local newspaper had rendered them all a great service by devoting nearly two whole pages to a reproduction of the new Home Office Regulations for Potteries, and he was sure they all ought to be thankful that large numbers of the 48,000 workers concerned had thus been enabled to familiarise themselves with this important code, made, as it was, chiefly in the interests of their health and welfare—a code all the more valuable because of its cheerful acceptance by the employers of that district, who were also mainly responsible for the present meeting.

Now if the proprietors of the local paper had adopted American methods—which. thank goodness, they had not—they might have looked for some startling headlines, such as "Potteries Brighten Up," "New Home Office Regulations," "Clear the Air," "Let in the Light," "Keep out the Dust," "Mop off the Dirt," "Wash and be Clean." And so their attention would have been focussed on the most important regulations. For once such headlines would have been justifiable, for he firmly believed the Potteries were going to brighten up in all the best senses of the word. The launching of these new rules was recognised as a great opportunity for everybody concerned, and he felt sure they were all determined to make one great united effort to improve the conditions of work, and the whole hygienic circumstances under which the ancient and most interesting trade of potting was carried on. The very presence there to-day of his audience was a happy indication of that determination. It would be a "long pull, a strong pull, and a pull altogether." In a very short while. in his official capacity, he hoped to be able to report "Everybody's doing it," though he might not use that precise expression.

The starting force in this movement was, perhaps, the fact of official compulsion, which meant that everybody had got to do it, the few possibly unwilling ones, no less than the many eager ones, so that all competitors stood an equal chance in a fair field. The fact of overwhelming importance to the movement, however, and the one most strongly favouring its ultimate success, was the splendid spirit abroad of general co-operation, which had so far been shown, not only by those who had everything to gain, but by those who might have to suffer a temporary increase in expenditure, which, however, he trusted might bear profitable fruit later on.

The headlines he had mentioned roughly summarised what everyone was asked to do, (1) Clear the air (ventilation), (2) Let in the light (dipping house windows, &c.), (3) Keep out the dust (exhaust ventilation, &c.), (4) Mop off the dirt (floors, work-benches, boards and utensils), (5) Wash (lavatories) and be clean (overalls, &c.). If one word could sum up the whole of these requirements, it would be "cleanliness"—clean persons, clean premises, clean atmosphere, clean utensils. Now ventilation was nothing but a means of cleaning the atmosphere—the science of air purification—and a highly important science it was.

Man, originally formed to spend his daylight in the open air, had gradually been forced to the necessity of working in covered buildings wherein his first great need—fresh air—would not circulate freely unless forced or encouraged by special appliances. Ventilation, therefore, supplied the means which help to restore his normal working atmosphere to as nearly as possible the value of outside air, and the value of fresh air was appreciated by all. It was not haters of fresh air who performed feats of remarkable endurance. Did such a one ever get to the North Pole, or even attempt it? A chart prepared by the well-known statistician, Mr. Holt Schooling, clearly showed the effect of outdoor occupation on longevity. Of the twelve best occupations the three best of all were farmers, clergymen, and gardeners—all open-air men, two classes at least of which were hard worked all the year round. Of the twelve worst occupations—and a long way higher up in the mortality scale—the first six included potters and lead workers, or did so include them at the time represented by that chart.

Proceeding, the lecturer said that he for one was looking for a substantial alteration of those facts and figures in the near future, and a fellow feeling for the endangered ones prompted his enthusiasm. Ten years ago his own health suffered a breakdown through close, uninterrupted indoor employment. Tuberculosis trouble threatened to an alarming extent. On most eminent advice he took to a lonely cottage in an elevated country place, and lived the life of a backwoodsman for six months, at the end of which period he came back to work in better health than ever before. He was informed he had escaped a galloping consumption, which would have carried him off in three months, yet his audience now saw him there, doing what was possibly the most arduous work of his life. But if he escaped becoming an incurable consumptive, his experience had left him a still more incurable optimist, and if his optimism was based on anything further than purely personal experience, he could attribute it to the remarkable effects he had known to accrue from the introduction of fresh air into work places previously ill-ventilated, for he had seen workers who, from being pale. flabby, and anæmic, had become as ruddy, buoyant, and cheerful as milkmaids—a change due to nothing else than copious, unstinted ventilation.

It might be said by some they had been feeding up. Yes, undoubtedly, feeding first on fresh air, and then on foods well digested as the result of an air-engendered appetite. It should not be forgotten that air itself was a food indispensable to human existence. Man could not live by bread alone, and although he cou d live for days and weeks without solid sustenance of any kind, he could not exist for ten minutes without air. "Try to hold your breath for five minutes, and see how it affects you," continued Mr. Pendock. Let it then be firmly established in the minds of all that fresh air was of supreme importance for the maintenance of human life, far more so than any other kind of food. There was no known substitute for it, and it was the only food for which they could—nay, must—partake of continuously day and night. It was the only food of which they could not take too much.

Admitting that the value of fresh air was better realised now than formerly, it was still quite certain that most people, even educated people, did not grasp the full measure of its tremendous importance in their daily lives. It was so abundant, so common, so easily accessible, that it was not valued at its true worth. If they were dependent upon their fellow men for its production, purification, and distribution, and if a national strike threatened to deprive them of only one hour's supply, how quickly they would come to their senses! They might be devoutly thankful, therefore, that alone among the necessities of life, their air supply was absolutely independent of lock-outs, strikes, and accidents. It was supplied by Nature in such boundless, mobile quantities, that no man had to seek it. It actually sought him instead. It surrounded him, rushed at him, clamoured for admittance through every door, window, chimney,

and "chink" of his dwelling, in spite of all he could and did to keep it out. It went still further, and found its way into the marvellous organs of his natural body, which were set there by Nature for his vitalisation. His attempts to exclude it here were still more unpardonable, and he should be extremely thankful for its importunity, which saved him from the consequences of his own folly. As to its purity, the purifying agents of Nature were so constantly at work upon it that if they only went to the "caller air" and opened their lung passages sufficiently, they could fill themselves to the full from the purest obtainable supply at a cost of nothing but the effort.

It was, therefore, all the greater pity that people, who ought to know better, and who would never eat after one another if they could avoid it, would often sit in a contaminated atmosphere, and breathe after one another, for hours on end, with deplorable results. He supposed no one would deny the importance of prolonging human life, or of making even shortened lives more worth living, more vigorous, more productive, more enjoyable. If that were true on the common grounds of humanity, it was equally true as a business proposition, when the health of millions of factory workers was concerned. Even on the very lowest considerations it paid.

Up through youth and childhood the average worker was not very profitable to the nation. He probably cost more than his earning power. The early years of manhood helped to restore the balance. But it was the years of maturity that were the only years of profitable productivity. When a man had attained his maximum skill at heavy cost to his parents, himself, his employers and the nation, it mattered a great deal if he could live long to exercise that skill at its best, if he could enjoy, say, forty years of highest efficiency, or be put out of action twenty years too soon. Moreover, on finally quitting the ranks of industry, he had a right to expect that he should be saved the misery of a broken-down, uncomfortable old age. In the evening of his life he was surely entitled to enjoy such comforts as were denied to him in the hustle and bustle of a strenuous career. What applied to the health of the skilled workman applied proportionately to all ranks of labour, and they could not deny them their claim to live at their maximum efficiency for a maximum time.

Now, granted that fresh air should be provided in abundance for our workers, what immediate and what lasting benefits could we expect from it? Supposing we took a worker from a hot, stuffy, dusty works and set him in the country for a few months. Would it be surprising if ten years were thereby added to his life? It would not surprise the speaker after his own personal experience of the "fresh-air" cure. Now, ten years equalled 3,000 working days. Think of that extension to the life of a valued workman. It might be impracticable to achieve such a result by sending him into the fresh air, but results nearly as good could be got by bringing the fresh air to his workplace.

To accomplish this, however, the ventilation must be very thorough. Nothing stinted or imperfect could be half so good as a copious, abounding supply. For modern practical research had shown that the benefits of fresh air are by no means confined to the lungs. The greatest advantage of all is its stimulating effect on the skin. To sit in a stuffy room and breathe fresh air through a pipe would not revive one, but to stand on a cliff and be blown by a breeze of the same air would be exhilarating. Air introduced into a workplace would produce its most bracing effects if kept constantly moving, constantly temperate, and copious in quantity. Air over-warm, moist, and motionless had a most depressing and undesirable effect. He was quoting now from Dr. Leonard Hill, F.R.S., R.S. Institution. If there was a constant general wafting movement of air in a room, large quantities could be changed many times an hour by modern methods without unpleasant sensations such as were frequently set up by less thorough but more draughty systems.

As foul air must also be got rid of as well as fresh air introduced, his subject might be divided into two parts, general and local ventilation: (1) General Ventilation, which meant the provision of an adequate and pure air supply to all persons in an occupied building; and (2) Local Ventilation, which meant the extraction of all kinds of impurities, which, being locally generated, could be locally drawn off before they had time to contaminate the air breathed by the workers. Not that these two aims of ventilation should be completely dissociated, for he considered that to be a serious mistake of the past. And if they should never be considered wholly apart, still less should they ever be in conflict.

Wherever a first-class system of ventilation was installed there was at first hand a most powerful aid to general ventilation, which could fully be utilised at slight extra expense by proper construction and disposition of the openings by which fresh air was admitted to replace the dust-laden air drawn off (in possibly larger quantities) by the fan. In a complete installation of high efficiency the same fan should not only draw off dust-laden air at the rate perhaps of over 200 cubic feet per minute per occupant by local exhaust, but it should also introduce and distribute 200 cubic feet per minute per occupant as a means of general ventilation, without causing inconvenient draughts. This was an important point to bear in mind when schemes for exhaust ventilation were being considered. A good instance of combined ventilation would be shown later on. Local ventilation was nearly always exhaust ventilation. Forced draught could very seldom be used in this connection, for the reason that air is more easily led than driven, and exhaust currents were more manageable than a blast. "Fickle as the wind" was a common expression, and one found this out when one experimented a little. Exhaust ventilation, then, was used to get rid of all kinds of impurities, but in potteries there was little to deal with except dust, and chiefly the dust of clay, lead, and flint.

Now why was dust harmful, and what kinds were the most injurious? That it was harmful to machinery every engineer well knew. The more delicate the mechanism the greater the care necessary, the greater the exposure to dust, and the more elaborate the means to exclude it. Yet, when they came to the human machine, the most delicate, the most beautiful, the most useful, the most indispensable of all machines, how little was sometimes done in the ordinary way of protection! It might sometimes be that a mere boy or girl was found working at a machine surrounded by dust sufficient to choke it, if the said machine were not thoroughly protected. Nothing, however, was done to protect the much more delicate physique of the little human machine, not because of any inhumanity on the part of the employer, but mainly because of the thoughtless idea that nature will always take care of itself. It was unfortunate that nature's safeguards were generally over-estimated. Primitive man, when dwelling in the open country, would be amply protected from such dust as he would there encounter, but the delicate doorkeepers of his system would be no match for the dust found in many modern factories, for reasons to be explained.

At this point the lecturer proceeded to describe how deleterious impurities are disseminated. All dust, he pointed out, in a chamber where there was perfect calm would rapidly subside. This could be shown by means of a simple experiment in which smoke—consisting of

fine dust—was enclosed in a glass tube sealed at each end. The minute particles would soon settle in the containing vessel, and the air therein become quite clear.

Dust consisting of heavier particles would only remain in mid-air so long as these possessed the momentum derived from some source of energy, such as a grindstone, which had occasioned their presence there. When not actually in flight or agitation they yielded to gravitation and fell below the breathing level. It was usually possible, therefore, to arrest these larger particles, either in their first flight or during their descent. When they could be intercepted by some suitable receiver, that would guide them away to the fan, or, more simply still, their immediate settlement into tanks of water and the like might be arranged.

It was found, as a rule, however, that the finer varieties of dust were far more harmful to human life than the coarser. In fact, recent statistics of mortality appeared to suggest that dust became dangerous in inverse ratio to its size. This was because the particles could remain a long while in suspension, and could float on very light and elusive air currents over a wide area, thus tending to vitiate the air breathed by many more persons. Moreover, it was the very finest particles which worked most havoc in the human system, because the protective portals, such as the mouth and nose, were not altogether proof against their entry. A man working in a cloud of road dust would continually clear his throat and nostrils of the coarser and irritating particles, and thus save himself from all but local injury, but another man working in an apparently much less harmful atmosphere, which might, however, contain tiny organisms, or microscopic specks of grit, fibre, metal, or poison, might be taking these into the most vital part of his system without suspecting his danger, for, except when actually poisonous, or disease-laden, and sometimes even then, dust might take a very long time to produce any perceptible signs of its deadly work.

Incidentally it might be stated that keenly spiked, barbed, or abrasive particles were much more injurious than were rounded ones, for they entered more readily into the tissues. Much also depended upon their solubility.

The difficulties of remedial action were many. To begin with, it was often difficult to convince either employers or employed that an effective system of dust removal must aim not only at the heavier and more visible dust, but even more particularly at the lighter, and comparatively imperceptible, particles which continually hovered round the operative, even after the heavier dust had been carried away successfully. Were this not so, dust extraction would be greatly simplified, because there were so many ways of capturing dust by simple and inexpensive methods which merely encouraged its gravitation. The effective removal of fumes, smoke, gases, and light dust was, on the contrary, by no means an easy matter, and would be well-nigh impossible if the property of floating in agitated currents of air were not common to all of them. As already stated, all dust particles, even the lightest (including smoke and vapour) would soon settle in a perfectly still air, but would fly about in a moving atmosphere with a persistence and energy depending upon the persistence and energy of the air current supporting them. To prove this, it was only necessary to watch a cloud of dust raised by a motor-car on a windy day, and compare its action with a similar cloud raised on a calm day, other conditions being identical.

The lecturer proceeded to show that consideration of the action of dust when left to itself, or to gratuitous air currents, enabled one to arrive at three distinct methods of preventing dust becoming harmful to workers in its vicinity. (1) It might be possible to prevent unnecessary creation or emission of dust from a given source, or, if impossible to prevent its creation, it might be possible to box in or enclose the source in such a way as to prevent its escape. For example, a rumbler in a fettling shop could be so encased. This method had a very limited application. (2) Where unpreventable dust was present in the air it might be possible to allay it, either by creating a perfectly still atmosphere, or by some means of damping it. It was, of course, impracticable to introduce sufficient moisture for this purpose where some forms of machinery were in use, as it was equally impracticable to ensure a perfectly calm air where the very processes by which dust was created depended upon heat or rapid mechanical motion necessarily communicated to the atmosphere. Besides, dust allowed to settle in a building might settle either on the workers themselves, or in places whence it would be difficult to remove it without reviving the nuisance. (3) By far the most practicable method remained, and that was to create an artificial and dirigible wind which should not only prevent all harmful dusts, fumes, and vapours from hovering or settling in the vicinity of the workers, but should convey all such impurities rapidly away to a remote point, where it could be discharged or deposited in safety.

The next thing to be realised, then, was the need of some method or appliance for creating such air currents as were necessary for the effective removal of these floating impurities. This object could be attained by such mechanical means as a fan, or by such other methods as an air shaft or chimney which would cause air to flow through intended channels in a required direction at a controllable speed. The latter appliances depended for their action on the movement of air caused by rarefaction, convection, or by variations of temperature and pressure in the building, however caused. Consequently they were not so constantly reliable in all states of the weather as the purely mechanical system of using a fan. So-called "natural" methods of ventilation were often least operative when most required, e.g., on a still, close, muggy day, when there was no wind to set them in motion. Whether they selected a fan or chimney to set the required air in motion, they must remember to ensure that the current generated was sufficiently strong and rapid, sufficiently large in volume, and sufficiently controllable. It was clear, therefore, that something more than the fan would be required.

It was thought for many years that fans alone were necessary for this purpose, and if one fan failed, efficiency could be obtained by multiplying their number. It would be just as reasonable to suggest that a train consisting of locomotives only would meet all the requirements of transport. A fan, like a locomotive, merely supplied the motive power, and again, like the locomotive, it required for its profitable employment an attachment corresponding in some senses to the train, i.e., an apparatus in which the material for transit could be stowed and carried to its destination under the influence of the principal motive power.

The complementary arrangement essential to the proper use of a fan was a main flue—or air duct—of proper size and construction to transmit air from point to point without unnecessary friction, congestion, or impediment. To this main duct must be added such branch ducts, throats, hoods, and air guides as might be necessary for especial purposes. Without these a fan would create a wind, but a "wind that bloweth where it listeth" was exactly what to avoid. At every point the current must be under control in volume, rapidity, and direction.

Although a fan had not to be considered as the "be-all and end-all" of satisfactory ventilation, it was still a

most important factor, and other things being properly regulated, the volume and rapidity of the exhaust current would depend upon its type and speed. Fans of several types now made had certain advantages for certain purposes, and the intending user must be careful to select one suitable to his particular requirements, duly considering economy in capital outlay, space required, fixing and motive power absorbed, for, in this way, it was easy to err very widely. Where the fan was required for fumes, vapours, gases, or for light, fluffy dust, a comparatively large volume of air must be set in motion through fairly wide, straight ducts, in which all the throats and connections were so constructed as to offer the least possible resistance to the flow of air. Under these conditions the most effective and economic results could be achieved by employing fans of a simple "propeller" type.

On the other hand, if the dust was heavy or adhesive, it might be necessary to arrange for a current of great rapidity, rather than one of large volume, in which case smaller ducts of more tortuous and elaborate description, and with more or less complicated connections, might be necessary. For such purposes the centrifugal fan in one of its many forms would be often found preferable. Comparisons of these fans might be useful before going further.

Proceeding to describe the different types of fans, the lecturer described the propeller fan as being simply made and comparatively inexpensive. Being fitted in a light frame, it occupied little space. It could be fixed in almost any position, and, above all, it could be made to move large volumes of air at a trifling expenditure of power. Against these advantages it must be noted that its efficiency fell off very rapidly with any increase of resistance to the flow of air, especially on the discharge side, for a propeller fan would draw better than it would drive. Notwithstanding this, the engineer who fitted up an exhaust installation with this type of fan had only to be careful to eliminate every possible cause of friction, back pressure or other resistance in either the exhaust or delivery flues, and success would result. This elimination of friction and resistance was a difficult matter, however, and it was on this account that many complete failures had been laid to the propeller type of fan that should have been laid to the want of knowledge displayed in fixing it, or the use of improperly constructed ducts, throats, and connections.

The centrifugal or cased-in fan was, for this reason, a safer appliance in the hands of the inexpert, because it would overcome resistance—necessary and unnecessary—to a much greater extent, and moderate efficiency could be sometimes attained by sheer "brute force," compensating lack of skill in designing the attendant pipe-work and appliances. But it should be noted that the process of doubling the work of a fan to hide defective designs or workmanship was certain to be expensive in the long run. Centrifugal fans were themselves more costly, than propellers. Their bulk and weight made them more expensive to fix, whilst their expenditure of horse power was usually much greater than for propeller fans working under equally favourable conditions. In selecting a fan of this type for exhaust purposes the pattern usually designed for blowing forges, cupolas, &c., should be always rejected, for in all cases of dust removal the work was done by fans whose capacity for exhaust was their leading feature. Consequently, a model should be chosen that would move a maximum volume of air with a minimum of internal resistance.

An illustration was here shown on the screen of three common designs of a centrifugal fan, and of these the one having its casing concentric with the spindle would be most unsatisfactory, whilst that whose casing extended with ever-increasing radius would be most efficient, the type between these two being of corresponding intermediate value. Further illustrations were shown of fans having a large number of narrow blades arranged like a drum. These would often be found useful for smoke, heat, or gases, but seldom for dust, which was apt to load on the vanes, or in the spaces between them. For dust of all kinds, fans having few blades of simple construction were much less likely to clog or choke. For his own part, the lecturer said he had always found the simplest models to be the most generally effective and reliable, whether in reference to the propeller or centrifugal type.

It would be profitable here to study the action of various fans in motion, first with free inlet and outlet, then with resistances of various kinds imposed on the suction and discharge currents. A diagram produced showed the peculiar action of a propeller fan in gathering and delivering the air. A simple anemometer test showed how limited was the range of suction, and, therefore, how valueless it was for any purpose except exhaust ventilation in its immediate locality, except when used in conjunction with some lengthy and suitable system of ducts and airways. The diagram would show, also, how much more apparently powerful and continuous was the discharge current—a feature which was worth a moment's consideration, because it showed the disadvantage of trying to ventilate a building by merely driving columns of air through it without proper means of distribution. It would be seen that the column of air proceeded from the fan in a well-defined stream which broadened very gradually until a distant point was reached. A person placed in the path of this current would be deluged with cold air, whereas those immediately outside the current would derive very little benefit from it. The temperature of the incoming air greatly affected the comfort of those who were first to feel it. A warm current at high velocity was approved as a welcome breeze, but a cold current at the same velocity and density was denounced as a fierce draught. Even 25 deg. F. made all the difference, velocities being equal; or velocity made all the difference, temperature being constant.

The action of the discharge current was interesting, because it was characteristic of all currents which moved in a building under the influence either of differing atmospheric pressures, or of mechanical propulsion, except when modified or diffused by some special apparatus. The tendency of every air current, in fact, was to move in a stiff, straight column, which stiffened as its velocity increased, until it became figuratively almost as rigid and penetrative as a solid mass in flight—much as a candle appeared to stiffen when shot through a deal door.

Rapid air currents, therefore, were less easily turned or deflected from a straight course than were slower ones. Moreover, if a high velocity current was rigidly opposed, it would rebound with almost equal force, and if a board were placed in front of the delivering fan, the current would recoil on the fan with sufficient impact to retard its action considerably, and might even cause some air actually to pass backwards through the centre. This back action on the discharge side of the fan caused what was known as "short circuiting" (i.e., the useless passing and re-passing of air through the fan itself). But the same ineffective action was produced when an obstruction was placed on the suction side of a fan, especially when the latter operated in a duct. The diagrams shown would illustrate these effects, and would also show the results of some experiments made by Mr. G. W. Walker when proving that propeller fans were less affected by resistances against suction side than against discharge.

These experiments suggested a ready method of testing the amount of obstruction or resistance in any system of ventilation operated by a propeller fan, for the extent of short-circuiting would be in proportion to the resistance which the fan was striving to overcome. These experiments suggested a ready method of testing the amount of obstruction or resistance in a system of ventilation operated by a propeller fan.

Passing on to deal with some points in duct construction, the lecturer pointed out that it had been stated already that the ventilation of large spaces could not be achieved successfully by fans alone. A fan acting at one point in a room could not draw all the air in that room to itself, even when no other air was admitted to take its place. The pressure might be reduced, but the room would still contain the same volume of air at less density. If the outer air admitted to fill the vacuum was allowed to enter through uncontrollable channels, it would usually take a sharp, straight course through the room to the fan without diffusing itself, and so would fail to dilute the foulness of the air inside, which was the object of its introduction. These difficulties could be overcome both at the in-flow and out-flow, by providing channels or air-ways of proper construction to promote the necessary circulation and collection of air currents set up by the fan or fans, whether the latter were exhausting or impelling the air, or both. The crude idea of such an air-way was a long wooden or metal flue or pipe, connected directly to the fan at one end, closed at the other, and provided at suitable points in its length with holes through which air would enter or emerge according to the direction and speed of the current. This simple structure was efficient only within very narrow limits, especially when high velocity currents were transmitted, because, as already explained, such currents acquired a semblance of stiffness which reacted against any attempt to force them out of a straight line, and the resulting conflict caused substantial retardation of the general flow.

In diagrams which were shown the currents entering an exhaust duct were seen to obstruct the main stream at each successive inlet, and, as retardation of the main stream also hindered the tributary inflow at each opening, efficiency rapidly fell off with the number of inlets provided.

In a series of experiments made by the lecturer for the Haldane Committee on the Ventilation of Factories it was shown how much of this friction could be easily avoided by slanting the branch ducts or throats at an easy angle to the main duct.

A diagram showed how greatly this slant facilitated the flow of air, not only in the main duct, but also through the tributaries. But, although an improved flow was produced through a duct and its branches by thus simply slanting the latter, the system arrived at was still a collection of separated inlets or outlets, each operating locally in effect, whilst the inoperative space between them was considerable. Recent improvements had been introduced which went much further towards facilitating the flow of air through pipes by eliminating the causes of friction.

Having discussed the three principal items in any ventilation plant—(1) the fan, (2) the main duct, (3) the collectors or distributors of the current—it now remained to consider some of the difficulties met with in their application, with special reference to the shape and size of the building to be ventilated. Of the prominent mistakes made in the erection of buildings for human occupancy, one was to make them much too large for actual requirements, on the assumption that large and lofty interiors required little or no ventilation. Air pent up in a large volume became foul and remained foul, just as much as in a small space, unless frequently interchanged with the air outside. Dr. Haldane found that a person working in a vast air-tight compartment, with 10,000 cubic feet of air space at his disposal, would breathe carbonic acid gas in greater quantities than one whose apparently meagre working space of 250 cubic feet was constantly flushed with fresh air. The commonsense deduction was that 250 cubic feet of air changed four times in an hour was much more invigorating than 10,000 cubic feet changed once in ten hours. Not only did large buildings require more ventilation, but their efficient ventilation presented more difficulty, especially in the case of those having broad or lofty interiors, for good ventilation largely depended on the nearness of association between the seats of demand and supply. The maximum demand was usually found towards the centre of the building, and the only supply was beyond the nearest wall or roof, so, accordingly, as the centre was near or far from the boundary, the difficulties of introducing and diffusing fresh air would lessen or increase. The same objections did not apply so much where rooms having a large floor area were either comparatively long and narrow between walls, or were not too lofty.

Another mistake was to suppose that a building only wanted ventilating when the air within was overheated. A known practice was to hang a thermometer on the wall with instructions that all fans and ventilators were to be set going when the temperature exceeded a given degree —60 deg. or so. It was, of course, desirable to maintain a reasonable temperature in an occupied room, and should the air become too hot, provision should be made for its easy escape, but it was possible for air to be uncomfortably hot and still comparatively injurious, whereas air at an enjoyable temperature might be substantially poisonous and disease-laden. It was a sure proof of bad ventilation when the walls and windows of a crowded room were bedewed with moisture.

The practice of raising the temperature in cold weather by suppressing all air supplies was as unwise as it was prevalent, especially where means of heating were used which did not at the same time assist ventilation, A hall heated by radiators and lighted by electricity might have a clean, cosy, airy appearance, and yet contain very bad air. The advantage of heating a building by means of warmed and filtered air currents was that in cold weather additional warmth was accompanied perforce by additional fresh air.

Reverting to methods of ventilation, it might be well to attempt some definition of the "plenum" system. This was a system by which air was blown into a room by fan power with the object of filling every part of that room with fresh air, leaving the foul air, displaced in the process, to find its own way out, as it would do through every available window, passage, or chink. Its advantages were that air was taken from controllable sources and was delivered to a room by controllable means. This system was not very serviceable in potteries, the buildings being unsuitable.

The exhaust system was a practically opposite system to the "plenum," the object being to withdraw all the air from the inside of a building by main force, allowing the outside air to find its own way indiscriminately through all available inlets and crevices in the structure. It was a very good system where the outside air was pure, but in crowded cities the impure air withdrawn from the interior might be merely replaced by almost equally impure air sucked in from contaminated sources. A good modification of the exhaust system was to withdraw all air through a good system of pipe work and inductors on the one hand, and to condnct the incoming air through a corresponding duct fitted with equalising distributors on the other hand —a "Receiver" and "Transmitter" system which

the lecturer thought would be largely favoured by engineers of the future, and had already been found highly successful in a talc works.

No less than 52 slides were displayed by Mr. Pendock in the course of his lecture, these mainly descriptive of various types of fans, main ducts and branches, hoods, apparatuses for the detection of dust and impurities and dust settlers and filters.

After the conclusion of the lecture a number of experiments were made with actual plants, which, in a single sentence might be stated as :—Open fan, suction, discharge, short-circuiting, candles, natural ventilation (reversed by fan, and also high speed), inequality without combs, and uniformity with, splashing through open holes, effect of lamination, local exhaust through comb, and also through plain nozzle.

It fell to Mr. Wm. Burton to move a hearty vote of thanks to Mr. Pendock for his lecture, and to Mr. Bernard Moore to second it, and both gentlemen spoke in a most congratulatory way of the lecturer's efforts. Mr. Pendock, acknowledging, said he was very pleased indeed to be able to help in any way he could, and he hoped those present would always think so. For those who had been unable to properly see the demonstration he had made arrangements with Mr. Yeaman, the Chief Electrical Engineer of the Borough, to allow them to see it at a later date.

The utility of the lecture, as may be gathered from this extended report, is, of course, undeniable, and we congratulate Mr. Pendock on his splendid exposition.

Foreign Notes.

M. Gaston Levasseur, of Rouen, having recently died, his widow and son are carrying on the business under the style of Vve Gaston Levasseur et Fils.

Russian Exports of Porcelain and Glass.—The quantity of porcelain goods exported from Russia in 1912 amounted to 90,000 poods, value 1,214,000 roubles, against 74,000 poods, value 901,000 roubles in 1911. And of glass goods 67,000 poods, value 890,000 roubles against 57,000 poods, value 768,000 roubles in 1911.

Tuberculosis Day in U.S. Potteries.—It is announced that April 17 will be regarded as "Tuberculosis Day" throughout the potteries of the United States. On this day collections are taken for the benefit of workmen suffering from the "White Scourge" and being treated in sanatoria. Our friends in the Potteries who are always so ready to extend a helping hand to those who need it will be interested in hearing of this commendable American custom.

The European Plate Glass Convention.—The British Vice-Consul at Charleroi reports to the "Board of Trade Journal" that the "Convention Internationale des Glaceries," which was recently renewed for another ten years, includes all the Belgian, French, German, Dutch, Austrian, and Italian plate glass manufacturers. The well-known United Kingdom works and the American works at Courcelles (belonging to the Pittsburg Plate Glass Co.) remain, it is said, outside the Convention, but have agreed to sell at the prices fixed by the Convention. A separate company, the "Union Continentale Commerciale des Glaceries," with a capital of £80,000, has been formed, outside the Convention, for the purpose of purchasing from the makers and selling all the plate glass required for export without distinction of brand; thus the buyer will not know which works made the glass he is buying.

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c.; also marked local newspapers.

Mr. Charles Clarke Bruff, china manufacturer, 59, Coalport, Ironbridge, has been elected a member of Salop County Council.

Alderman E. Lake, glass and china dealer, East-street, has been reappointed as an overseer for the poor for the City of Chichester.

Mr. H. Brittain, agent for Wood & Sons, Ltd., Trent and New Wharf Potteries, Burslem, has opened a showroom at 22, Ely-place, E.C.

The death is announced, at the age of 74 years, of Mr. Geo. Hand, who for many years was engaged at the Royal Porcelain Works at Worcester.

The Royal Polytechnic, Ltd., of 67 to 69, Argyle-street, Glasgow, held last month an extensive winter sale of pottery and glass, supported by some strong advertising in the local press.

Mr. W. A. Board, glass and china dealer, James-street, Weston-super-Mare, and Alderman E. Lake, glass and china dealer, East-street, Chichester, have been appointed overseers of the poor.

Mr. Wm. Hammond, Bollington (Cheshire), founder and head of the firm of Wm. Hammond, Ltd., tile manufacturers, left estate to the value of £2,562 12s. gross, the net personalty being £1,650 19s. 4d.

Mr. James Couper, of James Couper & Sons, glass manufacturers, Glasgow, left personal estate of the total value of £176,799, of which the personal estate in the United Kingdom amounts to £174,349.

Ford & Co. have purchased the stock, &c., of Mr. S. E. Beardmore, glass, china, and earthenware dealer, 139, High-street, West Bromwich, and are realising the stock by auction prior to having extensive alterations carried out at the premises.

Lead Poisoning Statistics.—During last year, according to a Home Office return, there were eighty cases of lead poisoning in china and earthenware factories in the United Kingdom, 14 proving fatal. In 1911 the number of cases was 92, 6 being fatal.

Mr. Richard Ireland, one of the oldest members of the glass and china trade at Kingston-on-Thames, who had for a long period carried on business in Apple Market, died a few days ago. He was 80 years of age and had been in business in the town for 54 years.

British Clay Exports for the month of February were as follows :—China clay, 42,362 tons (£48,739); fire clay, 4,690 tons (£3,108); other sorts, 4,753 tons (£3,718). Exports for the corresponding period of 1912 were :—China clay, 49,769 tons (£57,735); fire clay, 2,066 tons (£1,791); other sorts, 4,719 tons (£3,576).

Fatal Explosion in Fireclay Works.—A fatal explosion occurred last month at the works of the Bonnyrigg Silica and Fireclay Co., at Bonnybridge, near Falkirk. Two men were thawing explosives preparatory to their being used in mines when one charge went off. The man who was holding it was instantaneously killed, but his companion was only slightly injured.

Henry Hart & Co., Ltd., complete house furnishers, Snargate-street, Dover, have purchased the high-class china and glass business of Mr. Eaton, 183, Snargate-street, Dover, who has given up business. Hart & Co. Ltd., are having extensive alterations done to the premises in order to make them quite up to date. A sale of the present stock is now taking place, after which new

goods will be added to the department and the business carried on as usual.

A Word to the Wise.—We understand that a circular referring to a recent trial in the King's Bench Division has been sent to certain members of the pottery and glass trades. For the benefit of those who have seen this circular, we would say that the verdict was apparently due to the failure of the jury to grasp several technical points in the evidence, which would have been readily appreciated by members of the particular trades concerned. The verdict was in direct contradiction to the learned Judge's summing up, which was in favour of the unsuccessful party on every point.

Fires.—The encaustic tile works of Maw & Co., Jackfield, near Iron Bridge (Salop), were on Feb. 27 the scene of a serious conflagration. The fire originated in the drying stove, which is beneath a large warehouse containing tons of rich flooring tiles. Fortunately the firemen prevented the flames from obtaining a firm hold of the warehouse, but the damage done is estimated at £1,000.—Late on the night of March 19 a fire occurred at Rylands' Glass Works at Stairfoot (Yorks.). The conflagration originated near a packing shed, and was not subdued until damage to the extent of £500 had been done.

Potters as Councillors.—Mr. J. T. Peate, potter, and Mr. E. R. Corn, earthenware manufacturer, have been elected members of Armitage (Staffs.) Parish Council; Mr. L. Wedgwood, china manufacturer, on Barlaston Parish Council; Mr. B. Moore, pottery manufacturer, on Draycott-le-Moors Parish Council; Mr. W. Cooper, earthenware manufacturer, on Norton-in-the-Moors Parish Council; Mr. E. H. E. Cox, tile manufacturer, 6, Julia-terrace, Highbridge, on Axbridge Board of Guardians; and Mr. C. Ballam, tile manufacturer, Upton, on Poole Board of Guardians. Mr. Edward Service, pottery manager, Orrell-lane, Walton, Liverpool, has been re-elected a member of the West Lancashire Rural Council and Ormskirk Board of Guardians.

The Shops Act.—The glass and china dealers of Ealing, W., have sent a petition to the Town Council asking for an Order under the Shops Act for closing on Wednesday at 1 p.m. The Council have decided to take a vote of the traders on the matter.——Colchester Town Council have issued a draft Order under the Shops Act for china and glass dealers to close at 8 p.m. on Monday, Tuesday, and Wednesday; 1 p.m. or 7 p.m. on Thursday; 9 p.m. on Friday; and 10 p.m. or 1 p.m. on Saturday, with exemption during the ten week days before Christmas Day.——Bury (Lancs.) Town Council have issued a draft closing Order for china retailers, the closing hours scheduled being:—8 p.m. on Monday, Wednesday, Thursday, and Friday; 1 p.m. or 8 p.m. on Tuesday; and 10 p.m. or 1 p.m. on Saturday, with exemption during the six week days before Good Friday, the six week days commencing on Bank Holiday, the 12 week days commencing on the Saturday next but one before Whit Monday, and from Dec. 11 to 24 inclusive.

Lead Poisoning—From the statistics published in the "Labour Gazette" for March, it appears that the total number of cases of lead poisoning reported to the Home Office during February, 1913, was 64, of which 4 were fatal. In addition to these, 17 cases of lead poisoning, in which there were 2 deaths, were reported among house painters and plumbers. During the first two months of 1913 the total number of cases of lead poisoning reported under the Factory and Workshops Act was 107, of which 6 were fatal, as compared with 91 cases and 7 deaths for the corresponding period of last year. Among house painters and plumbers there were 32 cases and 5 deaths in the first two months of 1913, compared with 30 reported cases and 5 deaths during the corresponding period of 1912. Of the 64 cases of lead poisoning reported for the month of February, 1913, under the Factory and Workshops Act, there were 10 cases and 3 deaths in connection with the china and earthenware trades, five of the persons affected being females. In the months ending February, 1913, there were 10 reported cases and 3 deaths in our industries, as compared with 17 cases and 4 deaths in the first two months of 1912.

The Glass Sellers' Company.—A banquet of the Company was held on March 14 at De Keyser's Hotel. Mr. J. W. Burmester (the Master) presided. The Lord Mayor, who was the principal guest, responded to the civic toast, proposed by the Master. The toast of "The Glass Sellers' Company," was proposed by the Lord Mayor and acknowledged by the Rev. A. B. Boyd-Carpenter (hon. chaplain) and Mr. Acting Warden W. H. Lock, who remarked that all the City Companies possessed a strong family likeness. They were all founded with the same object—for the protection of their own particular trade. Protection in those days meant something different from what it did in the present day. The Rev. A. B. Boyd-Carpenter, in replying, said that the Company was neither too small to be insignificant, nor too large to be unsociable. Mr. W. H. Lock also responded, and stated that all the members of the Company were proud of its achievements, and of the fact that it had existed for over three hundred years. The City Guilds were founded to keep up the quality of the goods in the trade with which they were connected, and the Glass Sellers had well performed their duties in that direction. Other toasts followed.

Auction Prices for Pottery.—The collection of Sèvres porcelain formed by the late Mr. John Cockshutt, wall-paper manufacturer, of Willesden-lane, N.W., was sold at Christie's on March 11, when the 112 lots realised £11,794. A pair of eventail jardinières painted in the Chinese style by Dodin, 1763, realised £1,050. A small cabaret with Boucher subjects executed by Veillard, 1764, fetched £693. A second cabaret (1759), consisting of a sucrier and cover, a cream jug, a cup and saucer, and an oblong plateau, sold for £420. The sum of £609 was paid for a set of five plates painted in the style of Gomery. A Vincennes vase and cover, 10 in. high, sold for £325 10s., and a teapot and cover, on rose Pompadour ground, painted by Bouillat in 1757, for 270 guineas. Mr. Cockshutt's collection of English porcelain, comprising Bow, Chelsea, and Worcester vases and services of the highest class, has been bought by Messrs. Durlacher, of 142, New Bond-street. At Christie's, on March 12, a pair of Chelsea groups, modelled by Roubilliac, fetched 560 guineas, and four figures of Bristol porcelain representing the Seasons, 260 guineas. One buyer gave 750 guineas for a pair of Chinese hexagonal vases enamelled with flowers and birds on a yellow ground, of the K'ang-Hsi period, and another 380 guineas for a pair of Ky-lins, also K'ang-Hsi.

NEW COMPANIES, COMPANY REPORTS, &c.

Higham Manufacturing Co., Ltd.—Registered to carry on the business of glass manufacturers. Capital £10,000 in £1 shares (7,000 "A" and 3,000 "B").

Oakwell Red and Blue Brick Co., Ltd.—Registered capital £2,000 in £1 shares. Objects as indicated by title. Private company. Registered office, The Brickworks, Derby-road, Ilkeston, Derby.

Frank Tomey & Co., Ltd.—Registered capital, £2,000, in £1 shares. Objects to acquire the business of manufacturers of and dealers in glass tubing, electric lamps, Rontgen ray and glass bulbs, &c. carried on by F. S. Tomey and J. Kent, at the Borough Glass Works, Victoria-road, Aston, Birmingham, and at 66, Hatton-gardens, E.C., as Frank Tomey & Co. Private company.

George Goodwin & Son, Ltd.—This private company has been registered with a capital of £5,000 in £1 shares, to carry on the business of millers, grinders, manufacturers of earthen, sanitary, china, porcelain, Parian, and other ware, &c., and to adopt an agreement with J. F. G. Goodwin, A. J. Goodwin, and Elsie E. G. Goodwin. The first directors are J. F. G. Goodwin and A. J. Goodwin (managing directors). Registered offices, Westwood Mills, 2, Fenton-road, Hanley.

Furnivals (1913), Ltd.—This private company has been registered, with a capital of £20,000 in £10 shares, to carry on the business of manufacturers of and dealers in earthen, sanitary, stone, china, porcelain, parian, ceramic, and other ware, &c. The subscribers are K. H. Bailey, Trentham, Staffordshire, earthenware manufacturer; J. Bailey, Greenbank, Lawton, Cheshire, earthenware manufacturer. The first directors are K. H. Bailey, J. Bailey, and W. M. Binns. Registered office, Elder-road, Cobridge, Stoke-on-Trent.

Lax & Shaw, Ltd.—Registered capital, £30,000 in £1 shares. Object: To carry on the business of glass bottle and stopper manufacturers and dealers, looking-glass manufacturers, bevellers, silverers, embossers, ecclesiastical lead workers, &c. The subscribers are :—T. Lax, Osborne Villa. Cross Flatts-avenue, Beeston, Leeds; F. Lax, Brooklea, Cross Flatts-avenue, Beeston, Leeds; T. Lax, jun., 202, Cross Flatts-avenue, Beeston, Leeds; J. S. Shaw, Rosemount, Huby, near Leeds; S. H. Shaw, The Woodlands, Pool, near Leeds; A. E. Shaw, Holly Park, Huby, near Leeds. Private company.

O. C. Hawkes, Ltd.—The report of the directors for the year ended Dec. 31, presented at the meeting held at Birmingham on March 18, said: "The net profits, after allowing for bad and doubtful debts and making ample provision for depreciation and charging cost of replacement and repairs, amounting to £333 9s. 4d., to revenue account, amount to £10,777 14s. 9d., including balance brought forward from last year; from this must be deducted managing director and directors' fees £1,090, leaving a balance of £9.687 14s. 9d. The directors have paid a year's dividend of 5 per cent. per annum on preference share capital to Dec. 31 last, which absorbs £4,250, and now recommend that £4,000 be added to the reserve fund, making this £37,000, and the balance £1,437 14s. 9d. be carried forward. The directors elected Mr. Bernard Hawkes, who has been in the company's service for some years, a director during the latter part of the year. The directors regret to announce the death of Mr. John Harrison in September last. The turnover of the business has been progressive, and although the profits shown would have paid a dividend, the directors having in view a further development of the new branches, consider it prudent to strengthen the financial position by placing an increased amount to reserve.

Liens, Debentures, Satisfactions, &c.—Dennis Pottery, Ltd.—Debenture registered to secure £1,575, charged on the company's undertaking and property, present and future, including uncalled capital. Holder, W. Newton, 89, Chaplin-road, Longton, Stoke-on-Trent.——Dressler Tunnel Ovens, Ltd. (late Northolt Tile Works, Ltd.), London, S.W.—Registered £700 debentures, part of amount already registered; secured by general charge.——Aston Magna Brick & Tile Co., Ltd.—Registered £490 debentures, part of £10,000; secured by general charge.——Burslem Mills Co., Ltd.—Registered, £600 mortgages, to A. R. Wood, Wolstanton; charged on land and flint mill, Federation-rd., Burslem.——Arvon Brick and Tile Co., Ltd., Carnarvon.—Registered, £1,800 second debentures, amount of present issue being £1,350; secured by a general charge, subject to outstanding debentures of a prior issue.——Aston Magna Brick & Tile Co., Ltd.—Registered £1,890 debentures, part of £10,000; secured by general charge.——Kilner (John) & Sons, Ltd., Calder Vale, Wakefield.—Registered £6,800 second debentures; secured by general charge, subject to mortgage and first debentures.——British Luxfer Prism Syndicate Ltd., London, E.C.—Registered £3,000 debentures or charge, to F. W. Ellis and another, 2, Princes-street, E.C.; charged on Luxfer Works, Willesden, also a general charge.

TENDERS ACCEPTED.

For the Andover Union :—Crockery, Parsons & Hart.

For the Newport Guardians :—Earthenware, J. Ciceri & Sons.

For the Staines Union :—Earthenware, Mumford & Lobb, Staines.

For the Rochford Guardians :—Earthenware, Bishop Bros., Rochford.

For the Maidstone Union:—Crockery ware for six months, Jacob's Stores, £17 17s.

For the Woolwich Guardians :—Crockery, &c., Green & Nephew, Ltd., £138 17s.

For the Romford Union :—Earthenware for 12 months, Mr. W. Huntsman, £12 4s. 1d.

For the Islington Guardians :—Earthenware, for the workhouse, Mr. W. Huntsman.

For the Central London School District :—China, glass, and earthenware, Mr. W. Huntsman.

For the Whitechapel Guardians :—Earthenware, A. & E. Shepherd, Whitechapel, £52 2s. 9d.

For the City of London Guardians :—Mr. D. Shepherd, Whitechapel-road, glass, earthenware, &c.

For the St. Marylebone Guardians :—Earthenware, Mr. W. Huntsman, 41-43, Upper-street, N., £251 12s. 4½d.

For the Fulham Borough Council (Electricity Committee) :—City Glass Co., glass globes (recommended for acceptance).

Bedford Town Council have accepted the tenders of Ellis & Everard and John Knowles & Co., Ltd., for stoneware pipes for a year.

For the Metropolitan Asylums Board (recommended for acceptance) :—W. Adams & Co., Tunstall, Staffs., earthenware, for the central stores, 10 items, £160.

For H.M. Government :—Contracts let during February. Prison Commission :—Leadless glaze earthenware, Mintons, Ltd., Stoke-on-Trent; leadless glaze stoneware, J. Bourne & Sons, 34, Holborn Viaduct. E.C.

For the Bethnal Green Borough Council (recommended for acceptance) :—Glass, Pilkington Bros., Ltd., Horse Shoe-wharf, 10, Upper Thames-street, E.C., 8 items; J. Chater & Sons, 2, St. Dunstan's-hill, E.C., 3 items; Pryke & Palmer, 40 and 41, Upper Thames-street, E.C., 1 item.

For the L.C.C. Asylums Committee (for three years): Earthenware and china, Mr. J. W. Beswick, 43 items, £1,998 2s. 5d.; Pountney & Co., Ltd., 11 items, £1,182 10s. 2d.; W. Adams & Co., 15 items, £1,101 1s.; Mr. W. Huntsman, 14 items, £533 5s. 1d.; Doulton & Co., Ltd., 2 items, £20 4s. 9d. Glassware, Molineaux, Webb & Co., Ltd., 14 items, £545 5s. 3d.; Johnsen & Jörgensen, Ltd., 7 items, £66 12s. 10d.; Falk, Stadelmann & Co., Ltd., 2 items, £9 6s. 3d.; Welsbach Light Co., Ltd., 4 items, £24 19s. 6d.; Atkinson & Co., Ltd., 4 items, £100 1s. 8d.

China and Earthenware to the value of £545,200 were exported from Japan during 1912. The export for 1911 was valued at £537,800, and that for 1910 at £551,400.



EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR FEBRUARY, 1913.

		Quantities.				Value.			
		Month ended February.		Two Months ended February.		Month ended February.		Two Months ended February.	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	3,739	4,124	6,945	7,622	£5,293	£6,306	£10,418	£12,053
„ France	„	3,995	4,230	22,803	14,485	6,830	7,774	14,889	18,878
„ United States of America	„	23,407	20,741	45,557	44,384	31,961	30,548	62,614	65,813
„ Brazil	„	34,873	41,536	82,572	64,891	16,170	29,329	39,707	48,615
„ Argentine Republic	„	30,733	34,452	69,397	73,609	23,445	27,586	48,235	59,028
„ British South Africa	„	6,507	10,245	14,660	25,665	8,268	10,688	19,149	25,731
„ British East Indies	„	34,483	35,333	82,284	73,615	21,047	20,397	45,283	44,703
„ Australia	„	25,880	26,286	52,888	50,683	32,535	25,445	60,047	54,849
„ New Zealand	„	9,744	7,237	19,682	14,667	13,609	10,948	26,443	21,431
„ Canada	„	26,658	39,351	50,643	86,907	30,449	35,951	57,396	74,650
„ Other Countries	„	94,030	81,937	180,773	182,768	58,701	60,659	115,184	131,399
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	„	1,232	1,537	2,519	2,936	11,163	14,051	23,665	28,834
Floor Tiles for Tesselated Pavement	„	4,712	6,149	10,948	13,817	5,360	5,621	12,095	13,227
All other Tiles (except Roofing and Street Paving)	„	13,888	13,663	22,469	29,067	13,358	14,311	21,689	30,212
Sanitary Ware	„	28,222	30,388	55,842	64,574	36,469	44,232	73,860	95,046
Electrical Ware, Door Fittings, and Chemical Ware	„	3,500	9,050	9,742	14,480	3,863	5,482	8,211	8,919
Other Earthenware (including Semi-Porcelain and Majolica)	„	118,427	110,594	238,403	238,611	155,598	151,329	311,766	322,281
Jet, Rock'm, and Glazed Terra-cotta	„	516	1,147	710	2,362	603	833	958	2,152
Red, Stone, Brown and Yellow Ware	„	123,552	132,944	287,571	273,449	21,894	29,772	47,121	56,479
GLASS.									
To British South Africa	value £	—	—	—	—	8,177	7,713	17,431	19,874
„ Other Countries	„	—	—	—	—	134,972	129,316	271,351	282,396
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	17,544	20,680	37,387	49,270	31,007	32,996	63,202	79,626
Flint Glass	„	8,268	6,641	17,082	14,499	25,169	25,546	51,937	54,019
Glass Bottles	gross	80,039	74,998	159,670	158,485	47,611	45,498	97,425	93,754
Glass Manufactures, other sorts	cwts.	55,864	40,139	106,191	93,309	39,362	32,989	76,218	74,871

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR FEBRUARY, 1913.

Porcelain, Chinaware, and Parian	cwts.	2,875	2,938	5,834	6,288	13,565	14,488	28,078	30,864
Floor Tiles for Tesselated Pavement	„	70	2	70	11	103	7	103	19
All other Tiles (except Roofing and Street Paving)	„	1,734	2,598	4,309	4,481	1,106	1,585	2,869	3,014
Sanitary Ware	„	182	16	228	31	384	12	444	59
Electrical Ware, Door Fittings and Chemical Ware	„	2,475	3,126	4,588	6,303	4,364	5,035	7,398	9,971
Other Earthenware (including Semi-Porcelain and Majolica)	„	23,764	25,890	44,910	45,417	46,532	53,314	88,703	92,456
Jet, Rock'm, and Glazed Terra-cotta	„	5	66	9	204	16	130	46	380
Red, Stone, Brown and Yellow Ware	„	33,949	23,066	61,201	53,545	6,099	5,018	10,117	11,343
Window and German Sheet Glass	„	117,632	111,204	239,433	235,494	67,160	59,583	136,031	130,233
Plate Glass	„	33,870	39,873	63,700	79,428	41,882	46,571	79,284	93,899
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	„	67,898	71,121	135,572	150,222	98,558	97,744	200,038	206,657
Glass Bottles	gross	134,091	160,052	281,444	332,798	57,808	65,845	122,242	137,745
Glass Manufactures, unenumerated	cwts.	1,655	241	3,608	490	1,441	649	3,260	1,268

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR FEBRUARY, 1913

Porcelain, Chinaware, and Parian	cwts.	843	1,029	1,763	2,159	4,354	5,235	9,462	11,570
Of all Other Sorts	„	545	643	865	2,657	1,079	1,489	1,818	3,347
Window and German Sheet Glass	„	1,614	546	1,731	1,107	894	290	942	621
Plate Glass	„	578	344	917	2,544	822	476	1,341	2,999
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	„	1,249	786	2,363	1,677	2,927	2,732	6,185	5,758
Glass Bottles	gross	3,341	3,237	6,512	9,210	1,524	1,752	3,461	4,712
Glass Manufactures, unenumerated	cwts.	581	116	803	253	550	110	954	202

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Jan. 30, 1913, to Feb. 26. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to Feb. 26. Packages.	Corresponding Period, 1912. Packages.
Boston	534	868	1,084	1,245
New York	1,115	520	1,845	1,046
Baltimore	611	818	1,328	1,587
Philadelphia.....	199	273	395	512
New Orleans.....	142	109	206	147
Newport News ...	—	2	21	31
San Francisco ...	113	75	175	172
Portland, Maine.	158	166	675	294
Galveston	—	11	—	86
Portland, Oregon	45	18	64	26
Inland Points ...	63	36	167	88
Total	2,980	2,896	5,960	5,234

Fragments.

¶ The power of POTTERY GAZETTE advertising. A firm who recently patronised our "Small Advertisements" page write: "A modest three-line insertion in your January issue has brought us inquiries from the uttermost parts of the earth, and has put us in touch with a great number of English and foreign potting firms, and an enormous number of agents of high repute."

* * *

¶ The certificate of circulation of this special issue of 10,000 copies will be found on p. 383.

* * *

¶ One of our advertisers writes:—"Please set up the April advertisement exactly like that in the March issue, upon which we must congratulate you." We always try to make our advertisers' copy look well, and are pleased when our efforts are appreciated.

* * *

¶ Mr. Pendock's paper (pp. 436–442) may suggest to manufacturers who are inclined to "ventilate their grievances" that there are other things requiring ventilation quite as urgently.

* * *

¶ A "cake, candy, and china sale" was recently promoted by a political Association in Dundee. We trust that the interests of local dealers in these commodities did not suffer.

* * *

¶ The utility of International Exhibitions was evident to a small extent at Brussels. It appears, like other "Brussels sprouts," to have shrunk somewhat in the tureen (Turin). We trust that at Ghent it will not be found to have "gone" altogether (pp. 385, 418).

* * *

¶ How to "break it gently" to a creditor whose account you cannot pay: "Dear Sirs. Enclosed find my draft for £50, two per cent. off for ten days. Thanking you for past favours, I am, yours respectfully — ——." "P.S. This is the kind of letter I would have written if I had had the money."

* * *

¶ An error in calculation.—Our contemporary, the "Cabinetmaker," quotes from "The Oswestry Advertiser," a statement that: "The Brick and Tile Co. have been entrusted with an order for 400.000 double chequered blue tiles for consignment to Holland. As it takes 4,000 of these tiles to weigh a ton, the total weight of the consignment will be 1,600 tons." And these are the days of universal education!

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

THERE is one topic of pre-eminent interest in the Potteries at the present time, and that is the Royal visit. Questions of good, bad, or indifferent trade and the multiplicity of industrial problems that would otherwise be foremost are subordinate to it, for the district is to be honoured for the first time, at least in its modern history, with the presence of the monarch and his consort. Royal personages have visited North Staffordshire from time to time—King Edward when Prince of Wales, and King George when Duke of York—but the presence of the King and Queen, and their active interest in the industries of the area, are unique. The honour to the district is great, but the advantage to the potting trade of Royal interest and patronage is even more important. I will deal in detail later with the programme and the attendant festivities, for in a trade journal the state of business must have precedence, even to the particulars of a Royal tour.

It is not a little difficult at the moment accurately to estimate the trade of the district; indeed, no one comprehensive statement can be made beyond the observation that all is not well with business, and that there is an absence of the general buoyancy which one might have hoped for at the end of the first quarter of the year. The dulness in the home trade which I announced last month still continues, and there is hardly the same briskness of oversea demand as has existed for a considerable time; and yet, these remarks do not apply to every department nor to every firm. Some of the largest manufacturers, whose operations are not confined to limited markets nor to a few classes of ware, report a better turnover for the first two months of the year than for the same period twelve months ago; on the other hand, manufacturers whose business is not so wide in its ramifications have to record a flatness of demand. Nevertheless most factories are maintaining a regular round of operations. The general earthenware makers are not finding orders any too plentiful, particularly from home customers, and some of the china manufacturers at the Longton end of the district describe the falling away in the home demand as in the nature of a slump. Jet and rockingham makers also, I hear, are not nearly so busy as they expected to be. The sanitary ware trade, on the other hand, is described as good. The net result is an unsettled condition of the home market and not quite so satisfactory a state of affairs in the oversea departments. In regard to the latter the Canadian and South American demands are good, but the Australian has been less brisk, though this is regarded as but a temporary decline.

The reason for the present condition of trade is still said by some to be due to the manufacturers' insistence on advanced prices. but others are of opinion that the boom is at an end, and that this unsettlement heralds a gradual falling away to a lower standard of business. The weekly returns of the North Staffordshire Railway traffic give an indication of the goods sent out of the district, and during the last few weeks they have certainly been on a lower scale than the average for some time.

Of course, the March returns are decidedly above those of March, 1912, and at first glance are deceptive, but it has to be remembered that at this time last year the coal strike was in operation, and practically every factory was paralysed, and doing nothing beyond despatching the few goods which may have been finished before the stoppage. The effect of a conversation I had this week with one of our largest manufacturers is, I think, very pertinent to the condition of affairs. His firm deals with almost every market of the world and supplies a great variety of goods, and he remarked that in every department they were busy, and were, in fact, still working off some old orders ; nevertheless, there were indications that trade was not what it had been. Whether it was due to the end of the boom, or whether it was a slackness generally associated with the beginning of the year, he could not say, though he hoped the latter was the case. Not so long ago, if he advertised for men there was no response, or hardly any, but now there were any number of applications for any position that was vacant. Moreover, there was not now the difficulty of obtaining materials that there was last year. His firm then found difficulty, for instance, in securing supplies of flint and stone, and only overcame it by an extension of their mills ; now, however, they were constantly receiving intimations that millers were in a position to supply such materials. All these things, though small in themselves, are undoubted indications of a smaller production throughout the district.

I referred just now to the good condition of the sanitary trade, and there appears to be prospects of brisk business in this important department of the industry. The building trade is improving after an extended period of dulness, and briskness in that industry will undoubtedly be of great advantage to sanitary ware manufacturers. Owing to the high prices of building materials—bricks, tiles, timber, and, in fact, everything required in constructional work—few buildings have been erected beyond meeting immediate necessities. Few houses have been put up, and in many parts of the country there is a great shortage ; speculative building, as a matter of fact, has been non-existent for a considerable time. With a fall in the price of materials, great activity in the building trade would undoubtedly ensue in order to meet the existing demand, and there are already signs of the coming of such activity. Then will be the opportunity of the sanitary manufacturers, who are amongst the most up-to-date in the district, and quite equal to any demands that may be made upon them. A big factory for the manufacture of fireclay goods has quite recently been erected, which is in itself an indication of the development of the sanitary department of the industry. The export trade in this class of ware has also increased considerably within recent times.

The reports of the American trade are better than the export returns would seem to indicate ; some even describe it as very good. Evidently those who cater for the United States market with special lines are enjoying a good measure of the activity which obtains in the American potting trade, but so far as the more general business is concerned, it must inevitably be affected by the uncertainty as to the tariff question. In this connection something definite must soon be made known, for President Wilson has now issued a formal call for an extra session of Congress to assemble on April 7, and it is stated that the tariff revision which has been planned by the Democrat Committee of Ways and Means includes substantially the reaffirmation of most of the rates proposed by the Democratic Bills of last session which President Taft vetoed. So far as the potting trade is concerned, the only announcement is furnished by Reuter's Agency, whose Washington correspondent states that the Committee contemplates, inter alia :—

> Reductions in the rates on cheap grades of soaps, soap oils, cheap pottery, numerous articles of china, earthenware, porcelain, stone and crockery ware, now assessed at from 55 to 60 per cent.

From this statement it is impossible to arrive at a conclusion as to what classes of goods may be affected, or as to how little or how great the reduction may be. For more definite information we shall have to wait, but meanwhile the satisfactory feature of the announcement is that some reduction is obviously contemplated.

The day before this telegram was published I had a long talk with a manufacturer, who deals largely with the American market, on the subject of the tariff revision, and as he is in constant touch with his New York agent, he was able to give me well-informed opinions which throw considerable light on the question. He was confident that there would be a substantial reduction on earthenware, but not on china. This at first thought may seem strange since the bulk of the home manufactures of the United States are of earthenware and not of china, and naturally they are desirous of protecting their own industries. Moreover, the bulk of our exports to the States are of earthenware, in spite of the important trade in high class china wares. The reason for this desire to maintain a high tariff against china goods rather than against earthenware is rather complicated. My informant explained that the Americans are not so much afraid of English competition as they are of German, French and Austrian. The English competition is at least fair : so much cannot always be said of the Continental, but that is too lengthy a matter to go into. The Germans and French, in particular, are flooding the American market with cheap china, which comes severely into competition with American made earthenware—and, of course, English too. These Continental manufacturers, I was told, will supply a china dinner set at the same price as one of the best English firms can supply a first-class set in earthenware, and naturally some people imagine that the china is superior to the earthenware, and so patronise the Continental maker. In short, it is the competition of Continental china that the United States manufacturers are afraid of, and, of course, they cannot differentiate between that and English. This is unfortunate for our manufacturers, but at the same time the high class china which we send to America will doubtless hold its own even against the maintenance of a high tariff, and if the reduction on earthenware proves to be substantial, it will greatly benefit many of the manufacturers in the Potteries.

The programme of the visit of the King and Queen to the Potteries on Tuesday and Wednesday, April 22 and 23, has now been fully arranged, and it will be of interest to readers of The Pottery Gazette to refer to it in some detail, for the tour consists practically entirely of an inspection of the potting industry, in which their Majesties have long displayed an interest, and of which they have some knowledge, having on July 27, 1900, when Duke and Duchess of York, visited the works of W. T. Copeland & Sons at Stoke. Their Majesties will have two busy days, for no fewer than ten pottery and tile works will be visited, and, in addition, one colliery and two silk mills at Leek. The factories selected will afford the Royal visitors the opportunity of seeing the manufacture of all kinds of ceramics, from articles of every-day use to the highest products of science and artistry. An excellent

feature of the arrangements is also a great exhibition of pottery, which is to be held in the Stoke Town Hall, and which is to include the more important exhibits of the several museums and collections of modern wares. This will doubtless constitute a fine display, and will not only provide an adequate idea of the wealth of fine old pieces which the district possesses, but also demonstrate the excellence of the present day products and their great variety. The people of the Potteries, under the enthusiastic leadership of the Mayor (Alderman F. Geen), may be relied upon to give their Majesties a welcome worthy of their great reputation for hospitality.

The King has expressed a desire that no call should be made upon the rates for the decoration of the streets, but already there are signs that private enterprise will do what in the case of a formal visit the municipality would have done ; for instance, the Stoke Traders' Association have put in hand a scheme for the decoration of a considerable part of the central streets of Stoke at a cost of £600 to £750. The Corporation will be responsible for the decoration and illumination of public buildings, and manufacturers and individual tradesmen alike may be relied upon to do their part to give a gay and festive appearance to the route of the Royal progress, and especially to the works which are to be visited. The whole of the school children are to be entertained, and given opportunities of seeing the King and Queen as they pass through the towns, so that the occasion will be made one which will live in the memories of those who are to be the future citizens of Greater Stoke-on-Trent. For the treats to the children and other purposes the Council have voted £2,000. The old folks are also to have their share in the festivities, and are to be entertained, partly by means of the Corporation's grant and partly by means of privately raised funds. Committees have been appointed in each of the six towns of the Potteries, and they are busily carrying through the arrangements. The district has a national reputation not only for its industrial products but also for its choral singing, and the North Staffordshire District Choral Society has been commanded to sing before their Majesties and the other distinguished guests of the Marquis and Marchioness of Crewe at Crewe Hall during their stay. This is not the first Royal command the society has received, for the members sang at Windsor before the late King Edward.

The King and Queen will be the guests of the Marquis and Marchioness of Crewe from Monday, April 21, until Thursday, April 24. Their Majestics will arrive at Crewe on the Monday afternoon at 2.30, and after receiving addresses will spend an hour in the great engineering works of the town, afterwards visiting the Cheshire Dairy Institute at Warleston, and then proceeding to Crewe Hall. The North Staffordshire itinerary may be summarised as follows :—

Tuesday, April 22.—10.15 a.m. : Leave Crewe Hall, arriving at Newcastle-under-Lyme at 10.50. In Nelson-square their Majesties will make a brief stay and twenty local public men will be presented. 11.6 : Leave Newcastle, arriving at 11.18 at the Penkhull Garden Village, Stoke, the model estate in which the Earl of Harrowby takes an active interest. 11.25 : Leave Penkhull, arriving at 11.32 at Messrs. Mintons' works, Stoke, the first pottery manufactory that their Majesties will inspect. 11.59 : Leave Messrs. Mintons', arriving at 12.4 at Mr. Bernard Moore's works, Wolfe-street, Stoke. 12.14 p.m. : Leave Mr. Bernard Moore's, arriving at 12.17 at the Stoke Municipal Buildings for the inspection of the exhibition of ancient and modern pottery. 12.55 : Leave the Municipal Buildings, arriving at 1.0 at Messrs. Copeland's works, the factory which their Majesties visited in 1900. 1.27 : Leave Messrs. Copeland's, arriving at 1.32 at the residence of the Mayor of Stoke-on-Trent, Cliffville, Hartshill, for luncheon. 2.32 : Leave Cliffville, arriving at 2.37 at Minton, Hollins & Co.'s works, Stoke. 3.2 : Leave Minton, Hollins & Co.'s, arriving at 3.10 at Messrs. Ridgways' works, Hanley. 3.35 : Leave Messrs. Ridgways', arriving at 3.55 at Hanley Park, where the school children will be massed and sing the National Anthem. 4.2 : Leave the Park, arriving at 4.14 at S. Fielding & Co.'s works, Fenton. 4.34 : Leave Messrs. Fielding's, arriving at 4.44 at Mr. H. J. Colclough's works at Longton. 5.6 : Leave Mr. Colclough's, arriving at 5.21 at Trentham, where the Royal party will take tea with the Duchess of Sutherland. The party will afterwards return to Crewe for dinner, after a strenuous day's sight-seeing.

Wednesday, April 23.—10.15 a.m. : Leave Crewe Hall, arriving at 11.7 at Josiah Wedgwood & Sons' works, Etruria. 11.32 : Leave Messrs. Wedgwood's, arriving at 11.47 at Doulton & Co.'s works, Burslem. 12.12 p.m. : Leave Messrs. Doulton's, arriving at 12.23 at Alfred Meakin's works, Tunstall. 12.48 : Leave Messrs. Meakin's. arriving at 1.0 at the Birchenwood Colliery, Kidsgrove. 1.10 : Leave the Birchenwood Colliery, arriving at 1.30 at the historic Moreton Old Hall, Congleton, one of the finest half-timbered mansions existing. The afternoon will be spent at Leek, where their Majesties will inspect two silk mills, the Queen being particularly interested in the English silk industry. Afterwards they will take tea at Highfield Hall, the residence of Sir Arthur Nicholson, leaving for Crewe Hall at 5.45. It should be added with regard to the Potteries that the Executive Committee of the Corporation recommend a general holiday in Hanley, Stoke, Fenton and Longton on Tuesday, April 22 ; and in Burslem and Tunstall on Wednesday, April 23.

Last month I dealt in some detail with the problem which has arisen, owing to the disrepair of the " new " Harecastle canal tunnel, and the danger of interference with traffic through the possible closing of the tunnel. The Chamber of Commerce had urged the construction of a deviation canal so as to avoid the Harecastle Hill, but the North Staffordshire Railway Company had contended that the tunnel was capable of satisfactory repair without serious interruption of traffic. At a special meeting, the Chamber decided to communicate with the Board of Trade, urging the Board, " under the very important and exceptional circumstances to press the North Staffordshire Railway Co. to proceed with the deviation canal, and, in the meantime, to make such arrangements as will enable the present canal traffic to be carried on until the new works can be ready." At the bi-monthly meeting of the Chamber of Commerce on March 19, the secretary presented a communication from the Board of Trade, enclosing a copy of the North Staffordshire Railway Co.'s reply to the Board on the matter. The General Manager of the railway company in this communication stated :—

> I am to emphasise the fact that the cost (probably (£350,000) of constructing what they call the " alternative route " is altogether too serious a matter for a small company like the North Staffordshire Railway Co. to entertain. My board is confidently advised by their engineers that there is no insuperable difficulty in keeping the present tunnel in reasonable working condition without any such serious interruption to the traffic as the Weaver Trustees seem to fear.

POULENC'S LIQUID GOLD

2 GRANDS PRIX—PARIS, 1900. | 2 GRANDS PRIX—ST. LOUIS, 1904.
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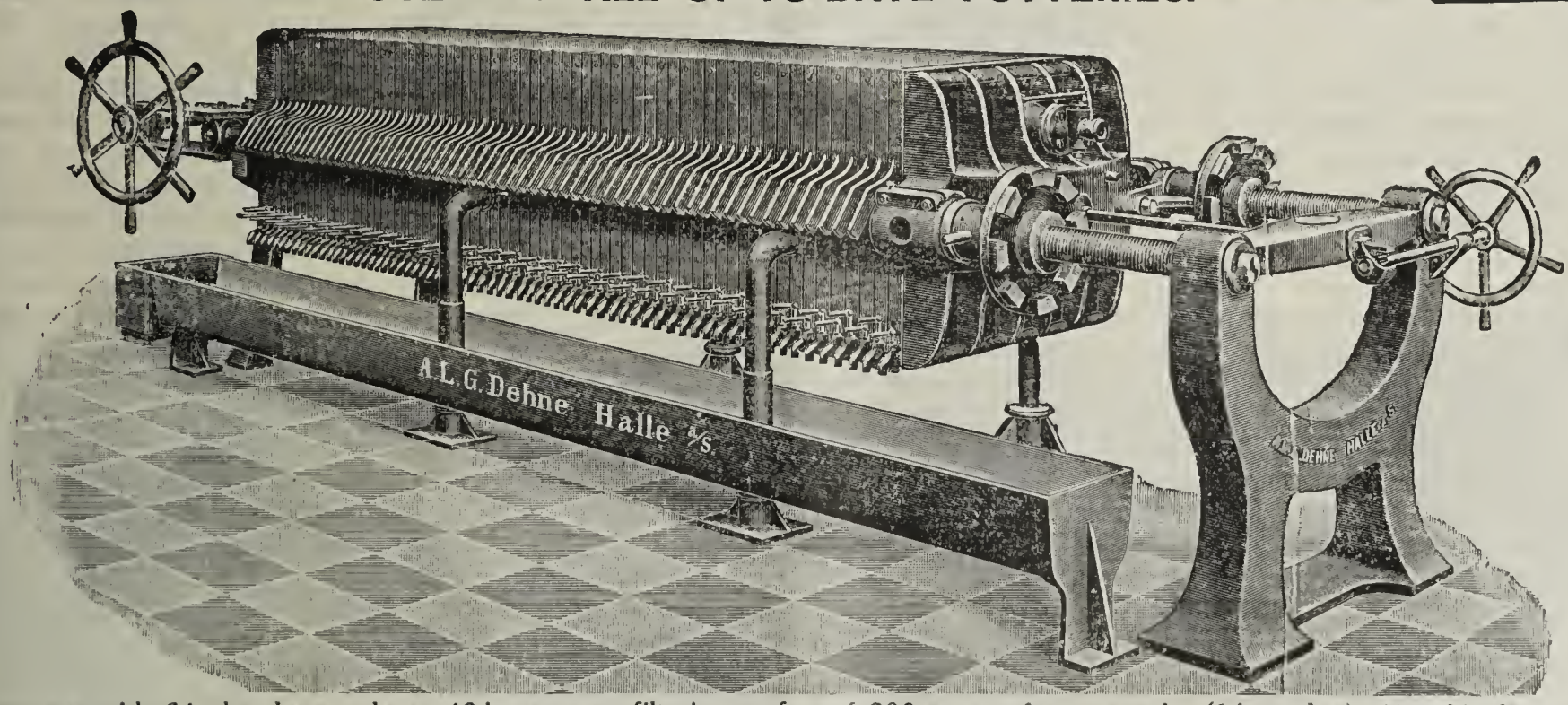
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This reply was regarded as very disappointing, and the railway company were the subject of rather severe criticism by the President of the Chamber (Mr. H. Boddington) and Mr. John Ridgway. The former remarked that if, as was said, this was a too serious matter for a small company like the North Staffordshire Railway to entertain, had not the time arrived when more money should be brought in ? . Failing this, the question of obtaining money from the Government, either from the Development Fund or some other fund, should be considered. The statement that a concern with a capital running into a great many millions was unable to undertake the expenditure of £250,000 or £350,000 seemed unworthy of consideration. He suggested the Chamber should write to the Board of Trade urging them to press the railway company to carry out the improvement which the Chamber considered necessary to maintain the trade of the district. A discussion of the subject resulted in the passing of a resolution, in which the Chamber expresses the opinion "that the position taken up by the railway company in ignoring the possible danger to the trade of the district is most unsatisfactory, and protests as strongly as possible that it does not meet the requirements of the Chamber on behalf of the district; that, in view of the fact that both the railway and canal are in the hands of the North Staffordshire Railway Co., it is no sufficient answer for them to say that they cannot afford to expend such a sum as £350,000, or whatever sum might be necessary for the purpose, but if this be the case, this Chamber considers that the necessary money should be obtained from some other source; further, that in view of the grave difficulty of the question, the Board of Trade be required to receive a small deputation from this Chamber to discuss the matter and consider the most advisable course to adopt."

Quite a number of local firms are contributing to the Pottery section of the Ghent Exhibition, which opens on April 26, and a representative display is assured. This reminds one that there has just been issued the report of His Majesty's Commissioners for the International Exhibitions at Brussels, Rome and Turin, 1910 and 1911, which includes an article by Mr. T. C. Moore on the pottery exhibits at Brussels and Turin. This is reproduced elsewhere in this issue, and will be read with much interest and doubtless with some criticism. Though one cannot agree with all his conclusions and suggestions, Mr. Moore does well to call attention to and compare the technical with the artistic qualities of British ware. He pays a compliment to the sound craftsmanship and scientific skill which have made English pottery pre-eminent in technical excellence and in commercial position, but he goes on to say, "We can hardly speak with the same confidence of the prospects of ceramics as a fine art." Perhaps this is merely a slip of the pen, but it should be emphasised that the production of pottery is a craft, a branch of applied art, but certainly not "fine art"; indeed, it is the mistaken idea that pottery may be made into a "fine art" that has hindered its development as an artistic craft. Mr. Moore proceeds to remark that the "restrictions of commercialism on the one hand, and the leaning towards dilettante specialism in the higher walks of ceramics on the other hand, have sharply divided the industry into two opposite camps."

Presumably he infers that artistically there is a wide gulf between the products of the "studio potteries" and the goods fabricated to meet the demands of commercialism. Doubtless there is, but the cure he proposes would only widen the gulf. In short, he suggests that the Government should in part subsidise the best ceramic artists and craftsmen of the district to produce their best for international exhibition. But perhaps Mr. Moore has in view the improving of exhibition specimens rather than an artistic uplifting of every product of the factory, from the cheapest plate to the most expensive vase. For this purpose the extension and development of our art education is the remedy, and a step in that direction is the scheme which the local education committee has in view. Probably a further step is the decentralised scheme of art education recommended by the recent report of a Departmental Committee, under which Stoke-on-Trent would have its central school of pottery design. But, after all, is not the public to blame that a higher quality of design does not characterise the essentially commercial fabrications of the potteries? The basis of supply is "what the public wants." Take, for instance, the American trade. There has set in, in the case of dinner ware and ordinary articles of utility, a demand for simpler and more artistic shapes and decorations, and manufacturers have quickly responded to the demand, with the result that the average American dinner set, in its severer simplicity, is far more a thing of beauty than the average article supplied to the home market. If we improve the taste of the English buyer, the English manufacturer will quickly meet his demand. A manufacturer's first business is to work at a profit, and the only way to do that is to supply what the public most readily purchases.

Quite one of the best, though by no means the largest, of the sixteen exhibitions organised by the North Staffordshire Arts Society was that held during March at the new Stoke Town Hall. In three top-lighted and handsomely appointed rooms exhibits of painting, black-and-white work, sculpture, and examples of craftsmanship were arranged, not the least important feature of the exhibition being the taste with which the works were hung and placed. The works were almost entirely the products of local artists, many of whom are engaged in the potting industry; for instance, one of the chief exhibitors was Mr. John W. Wadsworth, the art director of Mintons, Ltd., Stoke. Mr. Wadsworth showed a number of water colours and black-and-white drawings. Mr. C. Bernard Wood was responsible for some charming impressions of Cannock Chase, and Mr. W. J. Dukes exhibited oil paintings and water-colours. A young pottery artist of great promise is Mr. Harry Tittensor, whose decorative painting, "The Pirate's Return," was skilful in design and strong in draughtsmanship. The Duchess of Sutherland opened the exhibition, and an interesting address was delivered by Professor A. Beresford Pite, F.R.I.B.A., the head of the Architecture School of the Royal College of Art. Reverting to the exhibition, I should add that it also comprised some particularly interesting examples of craftsmanship, notably the repoussé metal work of the Duchess of Sutherland's Cripples' Guild. Pottery was not largely shown, but Mr. C. E. E. Connor was responsible for a number of underglaze painted plaques of tasteful design, and Mr. Howson Taylor showed a number of pieces of his well-known ware.

Undoubtedly one of the most difficult problems that face manufacturers in carrying out the new Home Office Regulations is that of ventilation and dust removal, so that the lecture delivered by Mr. C. R. Pendock (H.M. Inspector of Factories) at Stoke was very opportune. It is reported elsewhere in this issue, so that there is no necessity to do more than call attention to it. Mr. Pendock emphasised the advantages to health of well ventilated shops and a dust-free atmosphere, and he gave much practical advice and many hints to the manufacturers who now have to solve the problem. The launching of the new rules, he said, was recognised as a great oppor-

A VIRGIN CLAY FIELD.

Rora Valley, Halford, Ilsington, the scene of the latest clay discovery, is two miles from Heathfield and Bovey, and four from Kingsteignton, being in a direct line with the best pits in the district.



CLEARING FOR ROAD TO SIDING.

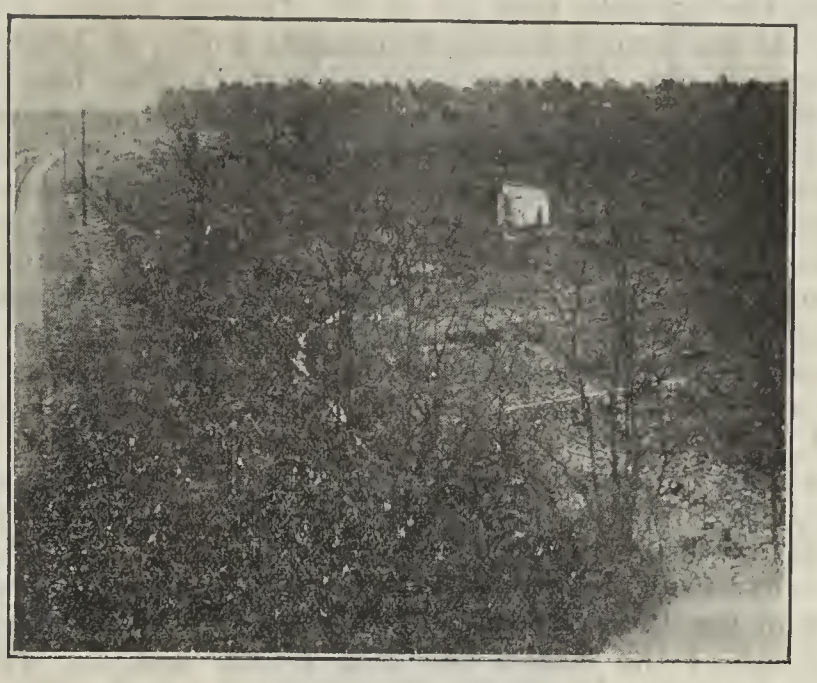
The Rora deposit appears to be an enormous pocket several acres in extent, containing, it has been estimated, more than twelve million tons of potters' clay of the finest quality. The black clays are particularly tough, and the brown, white, and blue grades are of an extremely high standard.

The clay is found at a depth of only six inches below the surface, and has been proved at 150 ft., although the bed is probably more than twice this thickness; scientists considering that the depth of the ancient lake into which the clay has accumulated was at least 500 ft.



FIRST OPERATIONS ABOUT 200 YARDS FROM LOWEST EDGE OF PROPERTY.

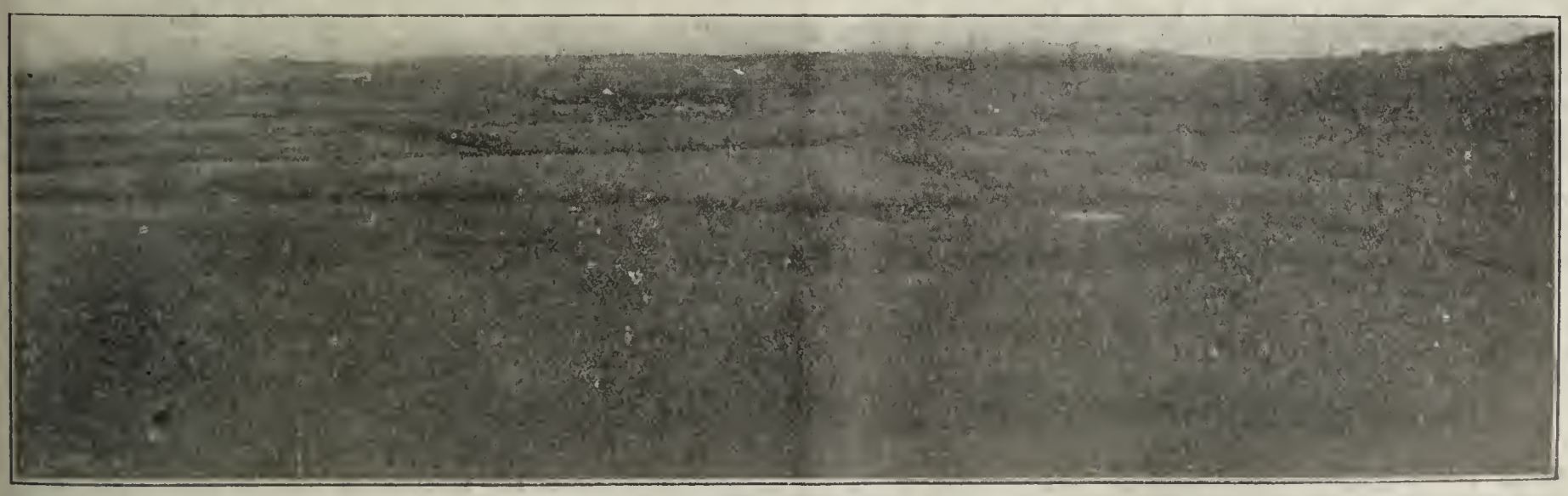
A huge mound, the summit 400 ft. above sea level, and which has been identified as the old Saxon stronghold of "The hill of the furze," but now known as Penn Hill, has been bored, and good clay found at a surprisingly high



SPACE FOR NEW SIDING.

elevation; the lower portion of the eminence being practically an enormous natural clay heap. A fine stream runs through the property, capable of supplying sufficient power for lifting, lighting, and pumping purposes.

A nine-acre site for a siding has been secured at Heathfield, and pioneers are already cutting their way through the thick undergrowth. When ready, a regular service of steam carts will be established to run to and from the siding and the pits. The Devon Ball Clay Co., Ltd., 14, Abbotsbury-road, Newton Abbot, are responsible for this new venture.



SHOWING VIEW OF PART OF PROPERTY

tunity for the Potteries, and he was sure they were all determined to make one great united effort to improve the conditions of work and the whole hygienic circumstances under which the ancient and most interesting trade of potting was carried on. He paid a high tribute to the spirit of co-operation that was being displayed in giving effect to the rules.

There was a very happy, and in some respects unique, gathering at the Victoria Hall, Hanley, on February 28, when the eightieth birthday of Mr. Thomas Taylor, J.P., head of the firm of Taylor, Tunnicliffe & Co., of Joiner's-square Works, Hanley, was celebrated. The idea of making a presentation to Mr. Taylor was taken up very cordially, for the relations between the firm and their workpeople are of the happiest, and so a handsome service of silver plate was subscribed for. Mr. Taylor, in turn, demonstrated his appreciation of the employees' thoughtfulness by inviting them to a tea and social gathering. Some 600 men and women attended, and it is interesting to observe that some of them had been in the firm's service for over thirty years. One of them, Mr. Alfred Cooper, had been employed by Taylor, Tunnicliffe & Co. for over forty years, and he was selected to make the presentation, which he did in a few appropriate remarks. The health of the recipient was proposed by Mr. G. C. Kent, who described Mr. Taylor as "the youngest-looking old man in the Potteries," the Grand Old Man of the works, and one of the Grand Old Men of the district. They were glad to see him in the possession of such health and strength, and wished him continued health, happiness and prosperity. Mr. Taylor thanked his employees for their "noble gift," and remarked that he looked upon his workpeople as his family. When the time came for him to leave them, he hoped his son and son-in-law would do their best for the workpeople as he had done.

Unhappily, the month's obituary is a heavy one. The regretted death of Mr. R. P. Copeland, J.P., D.L., of Kibblestone Hall, Stone, head of the firm of W. T. Copeland & Sons, Stoke, and a former High Sheriff of Staffordshire, is referred to in another column.——The death occurred on March 19 of Mr. Edward Beardmore, of The Grange, Barlaston, at the age of 64. Mr. Beardmore was a native of Burslem and a member of the well-known family of that name. For many years he had been unconnected with business, though the management of his extensive cottage property in the Potteries occupied a good deal of his time. He was for many years a very active member of the Wolstanton and Burslem Board of Guardians, and at the time of his death was chairman. He commenced his business career with the firm of Lea, Smith & Boulton, who then carried on a potting business in the Burslem Market-place. Leaving there, he became manager for Mr. Richard Alcock, who was then a well-known potter in the town. Later he joined as manager the firm of E. J. Bodley & Son, who then had the Scotia Works, and he was with them in 1881 when they removed to the New Bridge Pottery. He continued his management of the concern until its dissolution, when he ceased his business associations.——At the age of 63 the death took place on February 27 of Mr. John Hall, J.P., of Normacot-road, Longton, in which town he had resided since the age of six years. Mr. Hall was a potter's fireman by trade, and was employed by T. C. Wild & Co., of Longton. He was an enthusiastic worker in the cause of charity, and was highly respected.

Local educationists have learned with regret of the death of Mr. Albert W. B. Brown, M.A., Assistant Director of Higher Education for Warwickshire, at the early age of 39. After graduating at Oxford in 1897, he entered on the work of University Extension lecturing, and in July, 1900, came to the Potteries as secretary to the Council for the Extension of Higher Education in North Staffordshire, whose ultimate aim was the establishment of a college for North Staffordshire. Mr. Brown accomplished much useful work in organising University Extension Lectures, but the eventual object of the Council did not, owing to lack of funds, reach fruition. Since the Federation of the Potteries towns, however, part of the college scheme has been entered upon in the erection of the Central School of Science and Technology at Stoke.——The death occurred on March 15 of Mr. John Henry Robinson at his residence, Alsager. Mr. Robinson was well known as Chief Clerk of the Tunstall County Court, which position he had held for a period of 32 years.

We regret to learn that on Thursday, March 27, Captain Victor Henry Goss, of Oulton Rocks, Stone, and senior member of Messrs. Goss, of Stoke, the well-known manufacturers of heraldic ware, met with a fatal accident. Riding to the Potteries, he was thrown from his horse at Tittensor, and sustained injuries from which he died a few hours later. Captain Goss served as a volunteer in the Boer War. He was also a member of the Stoke-on-Trent Council.——Strikes in three departments of the potting trade have occurred (writes our Potteries correspondent on March 27). Notices for altered making prices had been given only in a limited number of instances, and serious disputes were not expected; but settlements not having been arrived at, over 600 persons are now on strike. In the jet and Rockingham trade between 400 and 500 employees have ceased work owing to the failure to meet their demand for ½d. per dozen increase on Rockingham teapots to jiggerers, turners, and handlers. Fifteen works are affected. At two tile works the tile makers and majolica paintresses, numbering 86, have struck in consequence of the firms' notices for reduced prices. The pressers at six works engaged in the manufacture of cane and white sanitary ware, to the number of 120, have asked for increased prices, which so far have not been granted. At two firms the men have ceased work; at two others they will cease at the week-end, and at the other two on Tuesday, unless terms are arranged.

THE CORNISH CHINA CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

THE unprecedented activity in the Cornish china clay trade has been fully maintained during the past month, notwithstanding the unfavourable month for shipping. There is very little to chronicle of importance beyond an indication of unrest amongst a minor section of the china clay workers associated with the Workers' Union. At a meeting which was held in the Public Rooms, the Rev. H. Booth-Coventry, a superintendent minister of the St. Columb United Methodist Circuit, gave an address. He began: "Men and absolute rotters." "Absolute rotters," he said, was a term recently applied to the clay-labourers by one whom he took to be an employer. He did not wish to imply that such sentiments were typical of the employers of that district, but while that element was present in the councils of the employers, the men would have a difficult task to get what they needed unless they forced it. He was convinced that 20s. per week was not a living wage in Mid-Cornwall, and he spoke, he remarked, from the practical and actual experience of the home life of the workers in that district. Mr. T. J. Bennett, head-master of a neighbouring Council school,

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I

said labour had recognised its own power, and they would never again lose sight of it. The organising secretary said they had sent in a petition to the whole of the clay companies asking for a rise in wages for all-day workers, minimum 25s., and piece-workers proportionately. Their arrangements were satisfactory, and they meant business. The position had been approved of by the Trades' Union National Executive. If the clay companies showed any fight, and threw down the gauntlet, they would put up as plucky fight there as they did at Fowey, where they came out on top with the G.W.R. They had received some favourable replies. They did not desire a strike, but they were going to be ready if it was needed, and every man outside their ranks must look out for himself.

An important meeting of delegates was held on March 15, when it was reported that a majority of the clay companies had not acknowledged their petition. Drastic proposals were discussed, but it was eventually decided to wait a few days, and developments were threatened unless there was a speedy consideration to the Union's petition. How the contemplated strike would affect the industry must remain to be proved, as the Union does not represent more than about a third of the men engaged in the china clay area.

Several interesting items concerning the china clay industry came up before the fortnightly meeting of the St. Austell R.D.C. last month. The proposed new road from Trelavour Downs to Whitemoor, in the St. Dennis district was under discussion, but the owners were reluctant to grant the necessary land because of a possible china clay deposit. A letter was read from the steward of Lord Falmouth, asking whether the Council would undertake to sink six trial pits 30 ft. and if the clay was not found at that depth to sink still deeper, and, if necessary, to sink others deeper. If clay was found there would be no alternative but to decline the application. Several councillors declared that such terms were simply ridiculous, and the Clerk was requested to continue his diplomatic negotiations if his patience was not exhausted. The question of supplying water to the builders of the new kilns at Par Harbour was raised by an application from one of the contractors. It was stated that five dries or kilns were in course of construction belonging to different companies, and the question of supplying water was a serious one. The kilns would be in the St. Blazey Parish, but the clay, which was conveyed down to them in pipes, would come from works all situated in the St. Austell Parish. The Rev. N. E. Purcell pointed out that the question of accommodation and providing water for the men was also one for consideration. There were between 40 and 50 men at one dry which was in course of erection. The question was referred to the councillors concerned.

A convention of clay workers was held at St. Austell on Easter Monday, under the auspices of the Workers' Union, Mr. Tom Mann, Vice-President of the Union, presiding. During the afternoon several members, principally jettymen from Fowey and St. Blazey, paraded the town, headed by the St. Blazey brass band. In the evening there was a large gathering in the Public Rooms, and the following resolution was unanimously agreed to :—"That this meeting of members of the Workers' Union throughout the china clay district hereby agree to sign our notices and place them in the hands of the local organiser undated, pending negotiations with the demand for a minimum wage of 25s., and a proportionate increase for all piece workers. We agree to adjourn the present convention for four weeks to afford ample time for a peaceful settlement." The local organiser said there was no question of the clay industry being able to bear the increased wages bill, and up to then 2,000 had signed the "down tools" policy. He had asked the china clay merchants to meet the men in conference. The Union were prepared for a fight, and there will be ranged on their side the whole of the Trade Union forces of the country. Mr. T. Mann said the wage was inadequate to maintain their families in tolerable decency, and if they adopted the "down tools" policy they would have the assistance of other unions. Throughout the proceedings a large majority of the local clay-workers were conspicuous by their absence, and whatever may be the ultimate decision of the Workers' Union, there will be a large proportion who will be quite adverse to any interference.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

THE improved prospects which, during the second half of February (after a rather depressing beginning for that month), shone out upon the travellers in these trades as they were covering the country after spring business commissions, happily did not turn out delusive. The wholesale merchants, with their travellers, have been continuing the pursuit during March, and almost all along the line a readiness to replenish stocks has been encountered on the part of the retail dealers over the landward towns and villages. It seems that in a great many cases reluctance to place new orders has been indulged in so long that depleted stocks began to be felt in a somewhat obtrusive measure, and hence the freer coming in of fresh commissions for the wholesale merchants, these in a large volume having been booked by the travellers covering the ground, but also, in addition, a considerable number of them posted to headquarters without waiting for the appearance of the traveller. In this conjuncture one feature has been favourable both to the ordering retailer and to the wholesale merchant, this being the fact that the makers of all classes of ware, glass, china, and ordinary pottery goods, have been found to execute the orders sent to them with but very trifling delays. These delays from the potteries and glass works have been the bane of our trades for a period of nearly nine months ; but, happily, there is considerable easement now in that respect. This applies to the makers generally of both England and Scotland, but at the same time an almost equivalent effect is found in regard to the Continental makers. Then, also, transit services are all improved, including railways and coasting steamers, likewise local transit in the big centres.

When my last report was despatched, Glasgow and environs were still hampered by a strike of carters and vanmen—a strike which lasted about two months, and affected all industries, although it was only partial in its extent after all, being confined to the driving hands of the large carting contractors of the district. This strike ended at about the close of February, and it was a good thing for our trades, as even they were beginning to be sensible of delays, particularly in the transit of wares bound for the West Coast of Scotland and the islands, and requiring to be shipped for these destinations by the regular coasters from Glasgow.

Reports from the wholesale pottery and glass merchants and their travellers concur in a general acquiescence (on the part of the country retail dealers) in the late substantial rises in market values. There may be a fear, also, on their parts, that the new pottery works regulations and requirements, now in course of being put in force, are to result by and by in further serious advances in market figures.

The retail dealers, within the large centres, have had the usual very quiet time since the date of last report, this

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being accentuated by the very bad weather that has prevailed during the greater part of the month of March. This space of time, throughout Scotland, has been quite the worst of a winter of unusual length and incessant variations in severity—snow, sleet, storm winds, deluging rains—and very markedly the worse, from the shopping point of view, of any continuous three weeks for years. At the present time of writing, near the end of March, there has been the welcome experience of some change, the past few days having been drier, and the wind almost quiet. If this holds, even for just a little, it will help these retail trades of ours, for much necessary shopping must have accumulated.

Since the close of the strike on the part of a section of the Glasgow carters, the air over Scotland has been comparatively clear as regards strikes in general. They are not absent altogether, but there is nothing big or comprehensive, and that tells for the good of these sensitive industries of ours. Shipbuilding in Scotland presents still a rather large summation of tonnage yet unfinished, and there is ensured good employement for some months to come. But new orders have been scaree for the past two or three months, and that does not help the outlook for china, glass, and earthenware.

The Gazette.

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

Porcelain Tile Co., Ltd., Hanley. R. E. Clark ceased to act as receiver Feb. 28.

Scottish Silicate Brick Co., Ltd. Meeting, G. & R. M'Culloch's, 183, West George-st., Glasgow, I.A. April 7 at 12, for an account of the winding-up.

Tilehurst Potteries, Ltd. (late F. Wheeler & Co.. Ltd.). F. R. Roberts, Aylesford Pottery, Ltd., near Maidstone, appointed receiver Nov. 9, 1912.

Union Plate Glass Co., Ltd. By a resolution passed on Feb. 25, and confirmed on March 13, W. Bowden, Victoria-rd., Grappenhall, Warrington, was appointed a liquidator of the company in place of A. R. Rogerson (deceased) to act jointly with J. P. Garnett.

Notices of Dividends.

Philipson Wm. T., 37, Market-st., Cleethorpes, glass, china, and fancy goods dealer. Supplemental, 4s. 4d., at O.R.'s, Great Grimsby.

Williams Joseph R., Brynhyfryd, and The Stores, Penrhyn Bay, late 9, Trefriw-terrace, Trefriw, and Morfan, Wellington-rd., Rhyl, glass and china dealer. First and final, 2s. 6d., at O.R.'s, Chester, April 5.

Petition for Discharge.

Bayne Jas., 304, St. Vincent-st., Glasgow, glass merchant, glazier, and plate glass silverer, sole partner of C. & J. Malloch, there. Agent, J. Davidson, 46, Gordon-st., Glasgow.

Notices of Intended Dividends.

Godwin Austin F. (separate estate), Goode Reste, Lugwardine, near Hereford, encaustic tile manufacturer. Claims to T. W. Meats, 39, Broad-st., Hereford.

Godwin Wm. H. and Austin F. Godwin, trading as Wm. Godwin & Son, Lugwardine Works, Withington, encaustic tile manufacturers. Claims to T. W. Meats, 39, Broad-st., Hereford.

Godwin Wm. H. (separate estate), The Ferns, Lugwardine, near Hereford, encaustie tile manufacturer. Claims to T. W. Meats, 39, Broad-st., Hereford.

Order made on Application for Discharge.

Wells Reginald Fairfax, 11, Sloane-st., Chelsea, S.W., potter. The affairs of this bankrupt came before Mr. Registrar Linklater at the London Bankruptcy Court on March 11 upon the hearing of his application for an order of discharge. Mr. Egerton S. Grey, Official Receiver, attended, and in reading his report, said that the adjudication in bankruptcy was dated Nov. 30, 1911. Proofs of debt aggregating £2,063 7s. had been lodged, whilst the claims of creditors treated by the bankrupt as expected to rank, in respect of which no proofs of debt had been received, totalled £36 12s. 1d. The assets, which were estimated to produce £380 15s. 5d., had realised only £216 1s., the difference between those two figures being principally due to over-valuation of the stock in trade and plant for the purposes of realisation. A first and final dividend of 9½d. in the £ on the admitted proofs of debt had been paid. For some years before April, 1908, the bankrupt experimented in the manufacture of works of terra cotta and pottery, borrowing money for living purposes. He then, being in debt to the extent of £300 to £400, opened a shop in King's-rd., Chelsea, as a manufacturer of art pottery, to which he gave the name of Col'drum. The business paid the expenses until 1909, when he took premises at 11, Sloane-st., and in order to provide himself with further capital, he borrowed £500. He also opened a factory at 10A, College-st., where he built six kilns. The business, which at first showed a loss, gradually improved, and at the date of the receiving order showed a small profit. But on Sept. 16, 1911, the landlord, whose rent was payable in advance, distrained, and the bankrupt filed his petition. He attributed his failure and insolvency to want of capital, to bad trade for three years before the date of the receiving order, and to his want of business experience. He had produced a rough cash book covering only a period of his trading, a debtors' ledger, and an imperfect creditors' ledger. No capital, trading, profit and loss, drawings or trade expenses accounts were kept. The bankrupt admitted that he was aware at no period of his trading could he have paid his debts in full, and he appeared to have contracted liabilities amounting to £1,500 with knowledge of insolvency. The Official Receiver opposed the application on the grounds that the bankrupt's assets were not of a value equal to 10s. in the £; that he had omitted to keep proper books of account; and that he had continued to trade with knowledge of insolvency. The Registrar granted the bankrupt his immediate order of discharge subject to his consenting to judgment being entered up against him in a sum of £100.

Private Meeting.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

Baxter George & Son, 82, High-st., Edinburgh, china merchants. The following are the principal creditors:—E. Bowman, London, £13 6s. 8d.; Nosta Glass Works Brit. Agency, Ltd., London, £11 10s. 11d.; H. Scheffer & Co., Ltd., London, £20 6s. 9d.; W. Kent, Burslem, £5 19s. 10d.; T. Till & Sons, Burslem, £11 1s. 3d.; Soho Pottery, Ltd., Cobridge, £9 6s. 9d.; A. & R. Cochran, Glasgow, £16 11s.; D. Methven & Sons, Kirkcaldy, £19 2s. 7d.; Barker Bros., Ltd., Longton, £13 6s. 3d.; Hammersley & Co., Longton, £18 3s. 9d.; A. E. Jones, Longton, £10 11s. 11d.; J. H. Middleton & Co., Longton, £26 4s. 6d.; Royal Art Pottery Co., Longton, £6 17s. 8d.; G. Warrilow & Son, Longton, £8 16s. 6d.; W. T. Copland & Sons, Stoke-upon-Trent, £7 8s. 2d.; Doulton & Co., Ltd., Stoke-upon-Trent, £23 6s. 1d.; Kirkland & Co., Stoke-upon-Trent, £10 8s. 6d.; Mintons, Ltd., Stoke-upon-Trent, £12 16s. 8d.; Ridgways, Stoke-upon-Trent, £10 14s 8d.; T. Rathbone & Co., Tunstall, £10 8s.; sundries, £10. Cash creditors:—Miss Baxter, £100; Miss M. Baxter, £80; G. Baxter (trustees of), £600. Assets:—Stock-in-

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trade, per inventory and valuation, £298 8s. 7d.; shop fittings, per inventory and valuation, £24 14s. 6d.; book debts, per list, £7 8s. 3d., valued at £6; cash in bank, 15s.; total assets, £329 18s. 1d. Liabilities:—Preferential claims: Arrears of rent due Martinmas, 1912, £40; half-year's rent due Whitsunday, 1913, £60; rates and taxes, £17 5s. 7d.; proportion of expenses of lease, £2 4s. 10d.; creditors' expenses, £8 9s. 11d.—£128 1s. 4d. Ordinary claims: Trade creditors, £314 6s. 11d.; cash creditors, £780; making a deficiency of £892 10s. 2d. Showing an apparent dividend of 3s. 8¼d. in the £ as a going concern. A meeting of creditors was held recently, when the meeting agreed to accept an offer of 7s. 6d. in the £, payable at four, eight, and twelve months, the last instalment, at least, to be secured, and it was recommended that the cash creditors be requested to withhold their claims till the composition is paid.

Colley Arthur Henry, china and glass merchant, 35, Parliament-st., York. The creditors interested herein were called together on March 14, when a statement of affairs was presented by the debtor's solicitor. The statement disclosed ranking liabilities of £204 4s. 7d., and assets estimated to realise £179. There were also preferential claims for £43 0s. 7d., and after allowing for these the net assets were reduced to £135 19s. 5d., or a deficiency of £68 5s. 2d. The assets consisted of stock-in-trade at cost, £160, book debts £15 (expected to produce £10), fixtures £7, and effects £2. It was stated that the assets had been taken at the debtor's valuation, and had not been verified. The household furniture was claimed by the debtor's wife. The business was started by the debtor some three years ago. At that time he had a capital of £200 which was willed to him by a relative. During the first fifteen months of the trading the turnover was at the rate of £800 per annum, but latterly, owing to keen competition, it had fallen very considerably. The turnover had not been sufficient to enable a profit to be made, and the whole of the deficiency, together with the debtor's capital, had been lost in the business. The premises were held at a rental of £80 per annum. The drawings had been at the rate of 25s. a week. The debtor made no offer, and it was stated that he was of the opinion he could not make the business pay, and intended to enter the employment of another firm. The creditors passed a resolution in favour of a deed of assignment being executed with Mr. Charles Turner, of Poppleton, Appleby & Turner, C.A., 155, Norfolk-st., Sheffield, as trustee. A committee of the principal creditors was also elected.

Extracts from the Registry of Deeds of Arrangement

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

** These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

(The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—Eds. P.G.)

Cundiff Jas. Frdk., 20, Haddon-st., Gorton, Manchester, Thos. Edwd. Cundiff, Market-st., Hyde, and Joseph Cundiff, 28, Clarence-st., Abbey Hey, and trading at 186, London-rd., Manchester, as F. Cundiff & Sons, leaded light makers, and glass embossers. Dated March 10. Filed March 15. Liabilities unsecured, £338. Assets, after deducting secured claims, £129. Tr., A. Teece, 23a, Bridge-st., Manchester. The following are creditors:—G. Farmiloe & Sons, Ltd., London, £16; I. Hetley & Co., London, £35; Le Personne & Co., London, £20; A. C. Marquelier, Charleroi, Belgium, £20; Heaps, Arnold & Heaps, Leeds, £40; W. Pape, Leeds, £35; S. Gratrix & Co., Ltd., Manchester, £10; Baxendale & Co., Manchester £29; I. Rogan & Co., Manchester, £54; R. Seddon & Sons, St. Helens, £30.

Rogers Gilbert, Ringwood-rd., Fox Holes, Newtown, Poole, and Victoria-rd., Branksome, Poole, brick merchant. Dated March 7. Filed March 11. Liabilities unsecured, £126. Property, after deducting secured claims, £52. Trustee, E. H. Curtis, Station-road, Poole, auctioneer. The following are creditors:—H. T. Toop, Parkstone, £15; Poole & Newcastle Coal Co., Ltd., Poole, £19; Foster Bros., Poole, £28; G. Bradford & Sons, Ltd., Poole, £7; Radstock Coal Co., Salisbury, £38; Ballam Lawson, Upton, £3. Preferential creditor: E. J. Conway (rent), Parkstone, £6.

Bankruptcy Proceedings.

Stewart Ernest Wm., 26, Gloucester-st., and Mark Thos. Stewart, 24, Bracondale, trading as E. W. and M. T. Stewart, at 54 and 56, Surrey-st., all Norwich, china, glass, and earthenware warehousemen. R.O. March 7. Adj. March 7. Exam., Shirehall, Norwich, April 23 at 11. At the first meeting of creditors of the above held on March 26 at the office of the Official Receiver, 8, King-st., Norwich, it was decided to leave the matter with the Official Receiver. According to the statement of affairs the liabilities amounted to £1,127, and the assets were estimated to realise £426 odd, the estate disclosing a deficiency of £700 odd. It was reported that the debtors commenced trading in partnership in the early part of 1883 at their present premises. At that time the capital of the firm was £50, put in by the debtor E. W. Stewart. The failure was ascribed by the debtors to bad trade and competition, and they admitted knowledge that they could not meet their engagements as they fell due for the past two years, and that they had been under pressure by process since last December. Their financial embarrassments increased, and upon a writ being served upon them they consulted their solicitor who, after communicating with some of the principal creditors, advised them to file their petition. Of the unsecured liabilities £61 was for money borrowed, the balance being in respect of trade debts. In the separate estate of M. T. Stewart the liabilities are put at £29, but neither of the debtors have any assets. The books of account kept comprise cash book, day books, and bought and customers' ledgers. The debtors stated that they had been unable to furnish a deficiency account, as the books kept by them were insufficient for that purpose. The following are creditors:—Alcock, Ltd., Stoke, £14; J. Brock, London, £30; J. W. Beswick, Longton, £10; Bourne & Son, Derby, £11; Burgess & Leigh, Burslem, £31; Clokie & Co., Castleford, £78; Clarence Pottery Co., Stockton-on-Tees, £30; Clayton, Mayer & Co., London, £16; Cope & Co., Longton, £23; Dornberger & Co., London, £33; Doulton & Co., London, £23; Doulton & Co., Burslem, £20; de Grelle, Houdret & Co., London, £16; G. Davidson, Gateshead, £13; Mrs. A. Dunham, Norwich, £41; Grimwade & Co., Stoke, £19; T. J. Green, Burton, £31; M. & J. Guggenheim, London, £10; Horn Bros., Ferrybridge, £27; Hepworth & Heald, Kilnhurst, £38; Heath & Son, Woodville, £10; Lancaster & Son, Hanley, £16; Mayer & Sherratt, Longton, £24; A. Meakin, Tunstall, £13; E. Max, London, £37; J. Ortweiler, Bohemia, Austria, £48; Pearson & Co., Chesterfield, £14; Pearl Pottery Co., Hanley, £10; Pountney & Co., Bristol, £13; E. Phillips, Castleford, £31 R. Sankey & Son, Ltd., Nottingham, £40; —. Shawl, Rotherham, £21; Sefton & Brown, Ferrybridge, £29; Sampson, Bridgwood & Co., Longton, £15; A. Stewart, King's Lynn, £20; W. M. Stewart, Norwich, £14; F. Stewart, £24; A. Stewart, £13; Wildblood, Heath & Co.,

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Longton, £26 ; A. Wood, Burslem, £15 ; Young & Hodgson, London, £12.

Werck Alf., 13, Fitzroy-st., Fitzroy-sq., W., artist in stained glass. R.O. Mareh 1. Exam., B.C., April 15 at 11. Adj., Mareh 1. The following are ereditors :— A. Steiger, St. Gall, £16 ; J. Lang, Southampton, £18. Partly secured ereditors : M. D. Pyke, London, £82 (security £8) : J. Durrer, London, £15 (security £6) ; rent, £12 : fully secured creditors, £12 : liabilities, £124 1s. 6d. ; assets, £3.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-plaee, W.C.

Applications for Letters Patent.

Finishing Hollow Glassware, No. 5,004.—A. E. Edwards. (Akt. Ges. Glasshuttenwerke Adlerhutten, Germany.) Apparatus for finishing hollow glassware that has undergone pressing by means of steam generated by the heat of the glass from a moisture containing pad eovering the finishing mould. Feb. 27, 1913.

Fire Bricks, No. 4,238.—E. C. Harrison. Fire brieks and the like, and manufacture of samc. Fcb. 19, 1913.

Flower Stands, &c., No. 4,740.—Coles & Fryer, Ltd., and F. C. Smith. Flower stands, table eentres, and the like. Fcb. 25, 1913.

Manufacture of Hollow Glassware, No. 3,577.—A. A. Mohn. (C. Baumann, Franec.) Manufaeture of hollow glassware by maehinery and apparatus therefor. Feb. 11, 1913.

Moulding Plastic Material, No. 4,201.—Huntley & Palmers, Ltd., and G. Albert. Machines for moulding plastie and like material. Feb. 18, 1913.

Non-Refillable Bottles, No. 5,502.—F. B. Clark. Non-refillable bottles. (Con. date Mareh 5, 1912, United States.) Mareh 5, 1913.

Receiving and Sorting Dishes, No. 5,149.—R. R. Parry & H. Parry. Apparatus for receiving and sorting dishes or other artieles or objeets. Feb. 28, 1913.

Slip Taps and Nozzles for Filter Presses, No. 4,433. —J. Newton. Slip taps and nozzles used in filtering presses, particularly sueh presses as are employed for filtering potters' slip. Feb. 21, 1913.

Unspillable Bottles, &c., No. 4,145.—J. N. Cosby. Unspillable bottles, pots, and jars. Feb. 18, 1913.

Specifications Published.

1912.

18,426.—Sehncek. Roofing tiles.

22,140.—Jewett & Kraft. Combined lid and strainer for jugs.

3,352.—Komlosy. Baking pie dish with handle.

3,575.—Groeott. Pumps for slip and the like.

14,778.—Sykes & Sugden, Ltd., & Smith. Machines for making glass bottlcs, jars, and like hollow ware.

17,147.—Snyder. Moulds for making hollow artieles from plastie materials.

17,297.—Skinner. Roofing tiles.

17,468.—Chatwyn (Steingutfabrik Ges.). Ceramie easting proeess and apparatus therefor.

6,123.—Gibbs. Decorated glass and glassware and the produetion of the same.

25,771.—Creswick & Scales. Tiles for roofing.

10,853.—Heath. Dishes, eake-stands, and the like.

13,720.—O'Brien. Machine for grinding and bevelling the edges of glass pieces.

28,303.—Platschiek. Spittoons.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

612,041.—J. Walsh Walsh. Lodge-rd., Birmingham.

612,269.—Cauldon (Brown-Westhead, Moore & Co.), Ltd., Stoke-on-Trent.

612,664 and 613,201.—Lancaster & Sons (Hanley), Ltd., Dresden Works, Hanley.

613,037.—W. Bennett, Cleveland Works, Hanley.

613,376.—N. Burt & Co., Ltd., 195, Wardour-st., W.

613,421.—F. Beardmore & Co., Ltd., Fenton.

613,441.—J. Tams, Ltd., Crown Pottery, Longton.

613,498.—C. T. Maling & Sons, Newcastle-on-Tyne.

613,499.—S. Fielding & Co., Ltd., Stoke-on-Trent.

613,566.—Naylor Bros., Denby Dale, near Huddersfield.

614,594, 613,567 and 613,608-12.—Grimwades, Ltd., Stoke-on-Trent.

613,615-16, 613,618-22, 613,614 and 613,617.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.

613,691.—R. W. Bill, 7, Headingley-rd., Handsworth, Birmingham.

613,770.—W. H. Goss, Falcon Pottery, Stoke-on-Trent.

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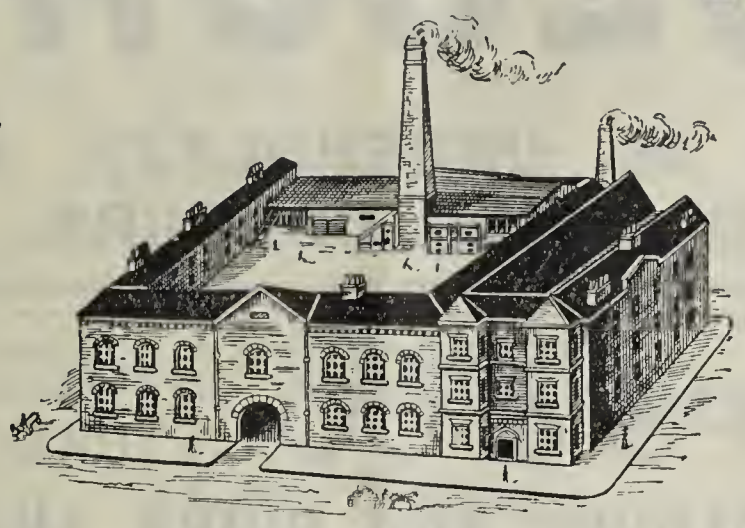
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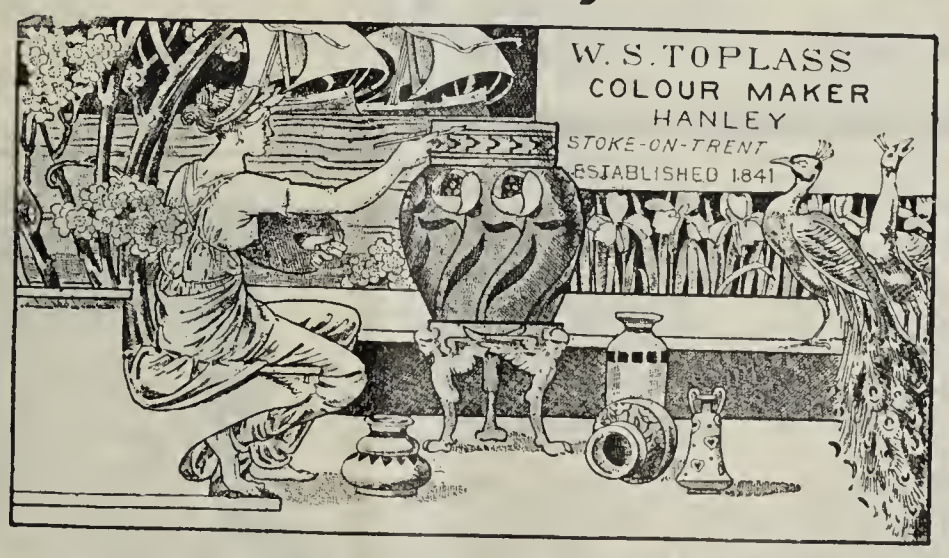
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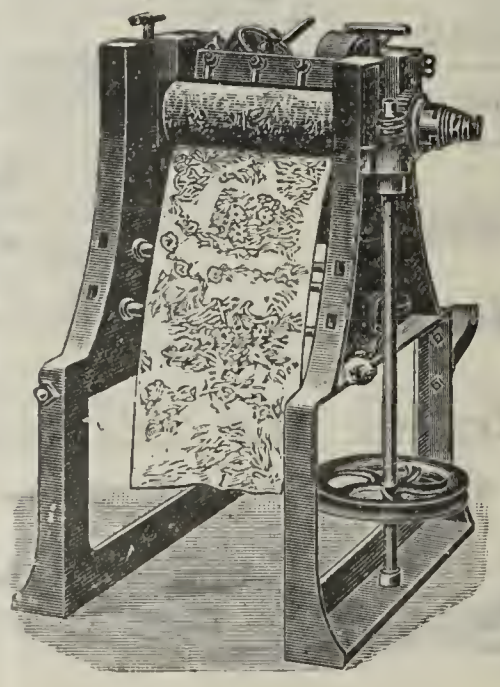
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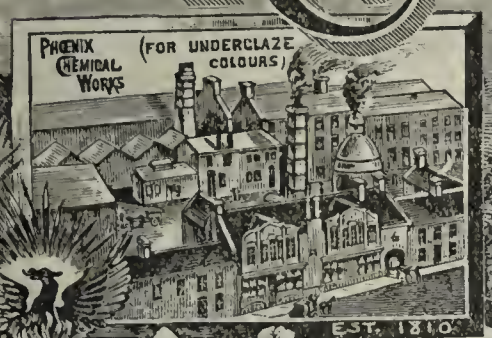
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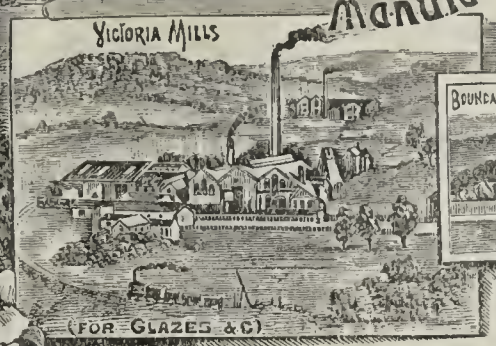
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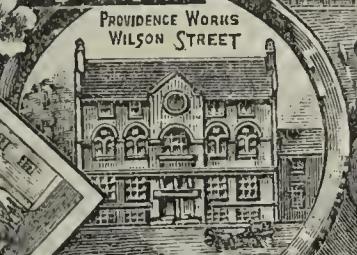
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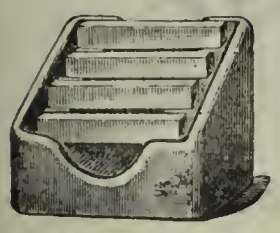
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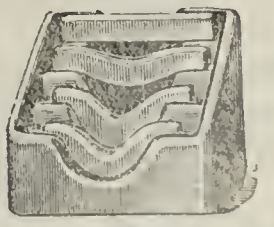


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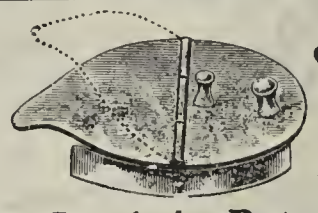
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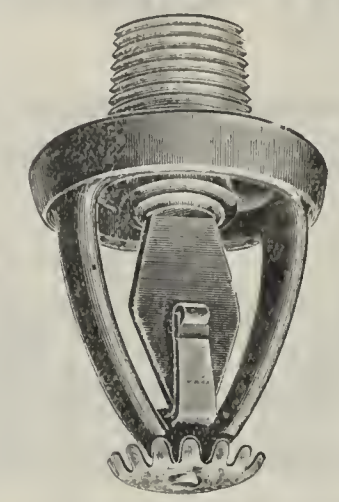
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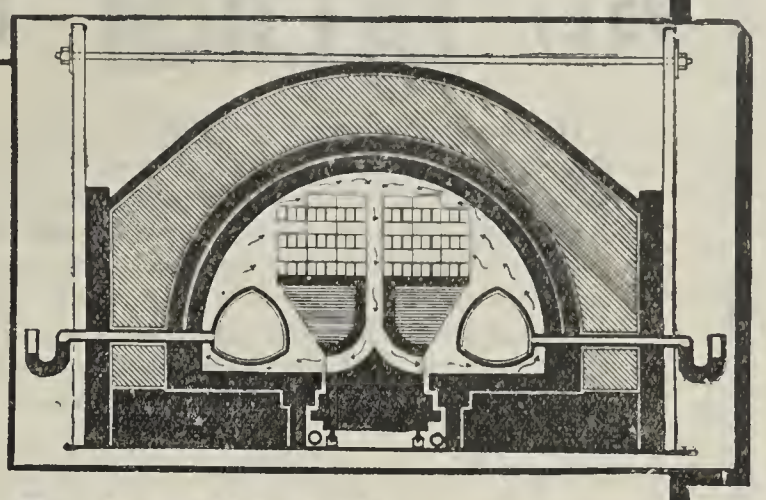
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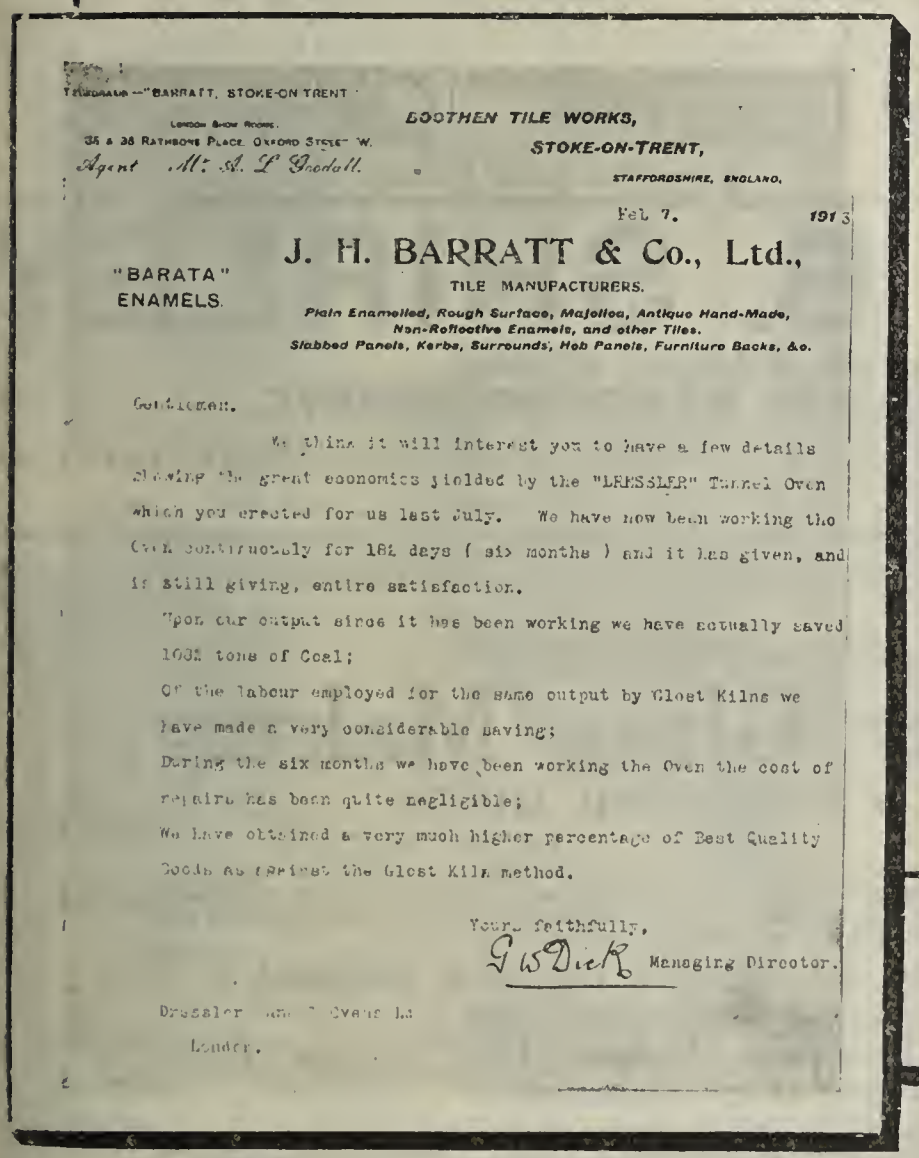
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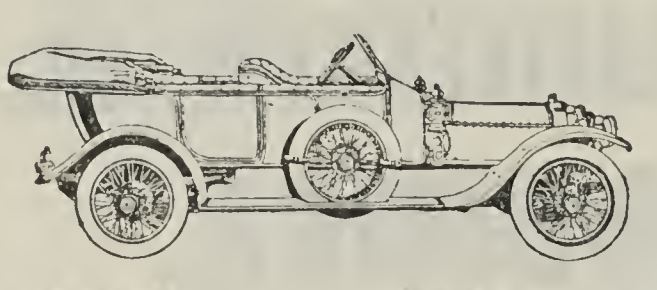
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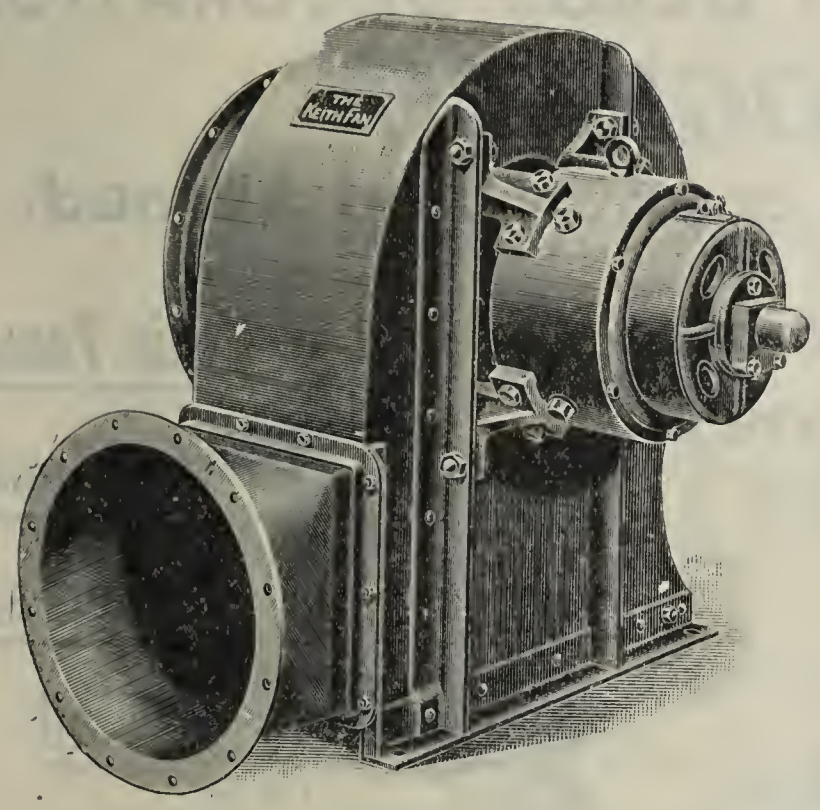
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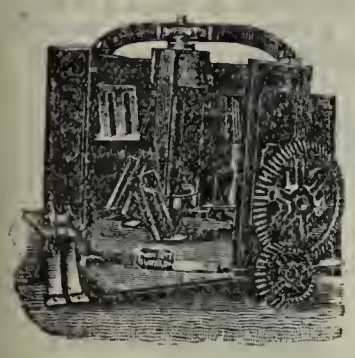
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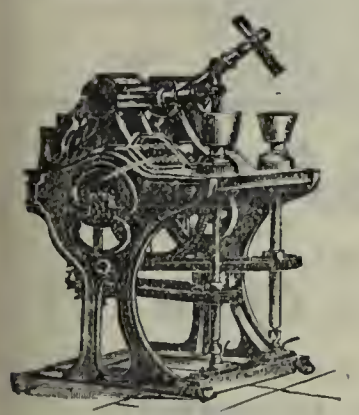
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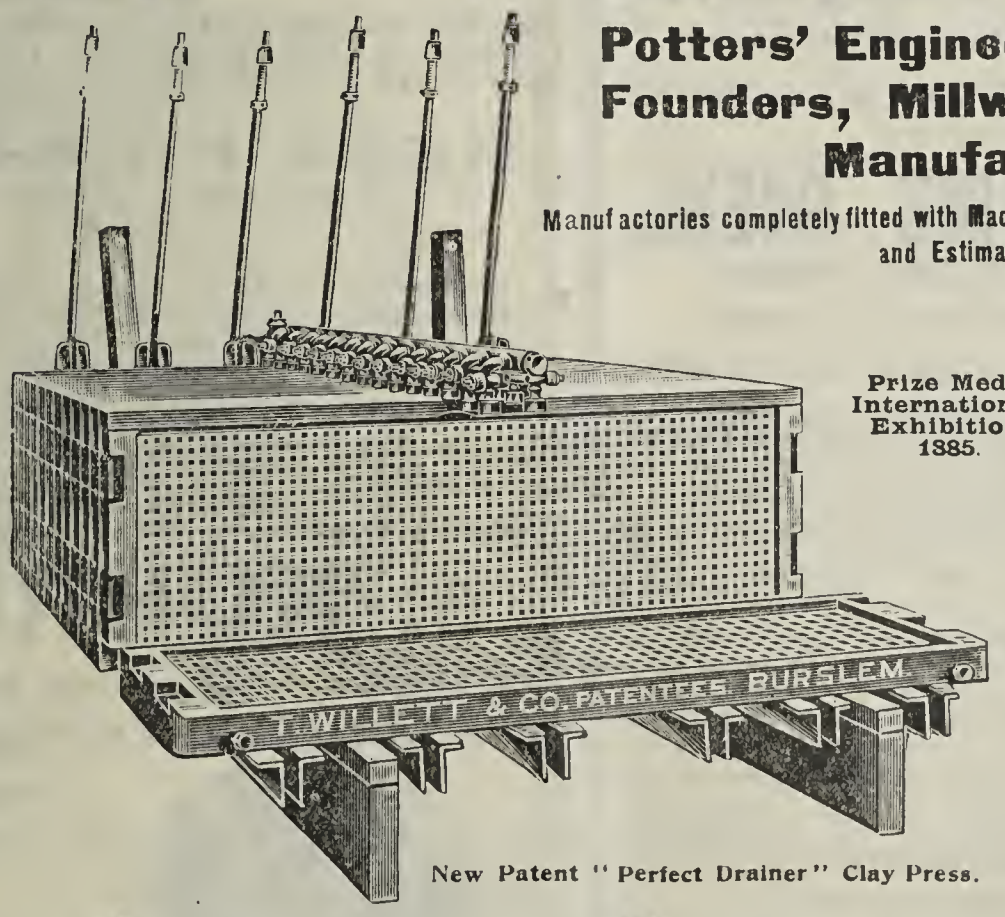
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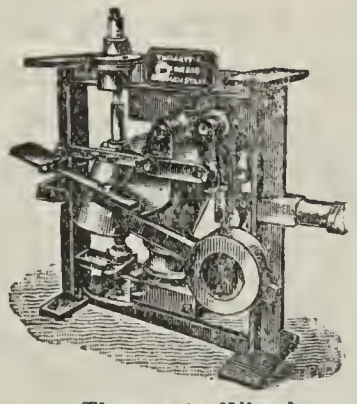


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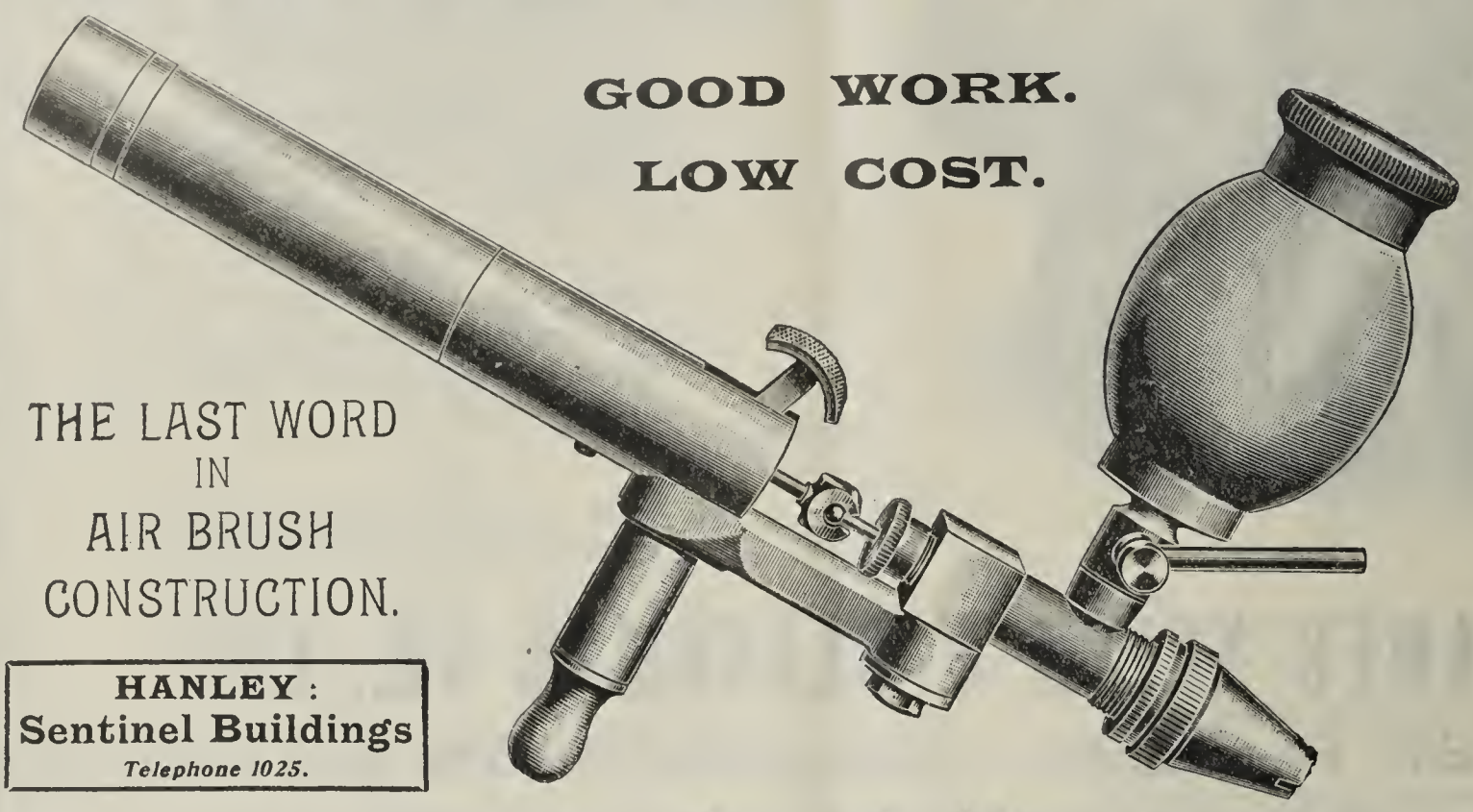
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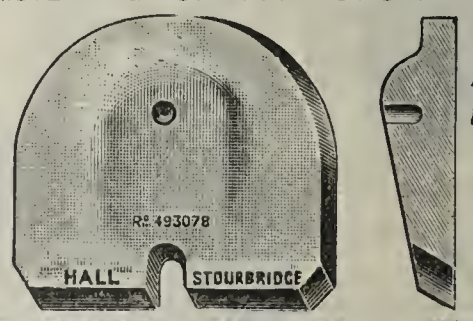
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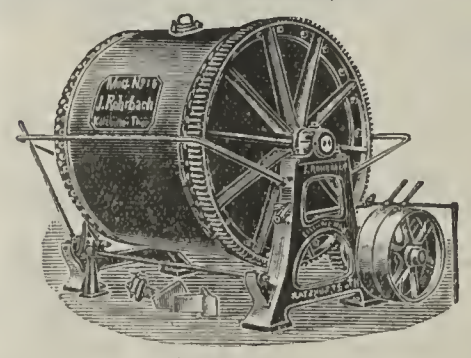


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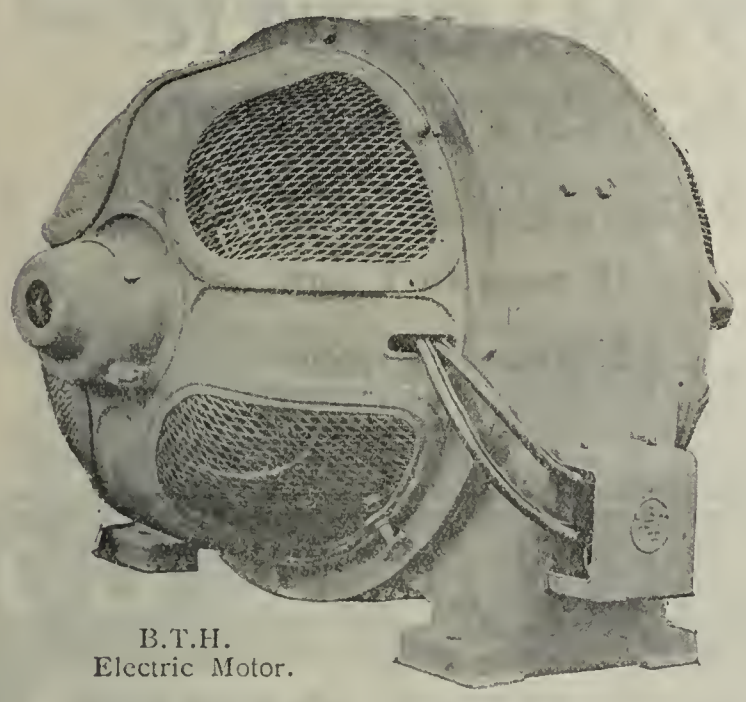
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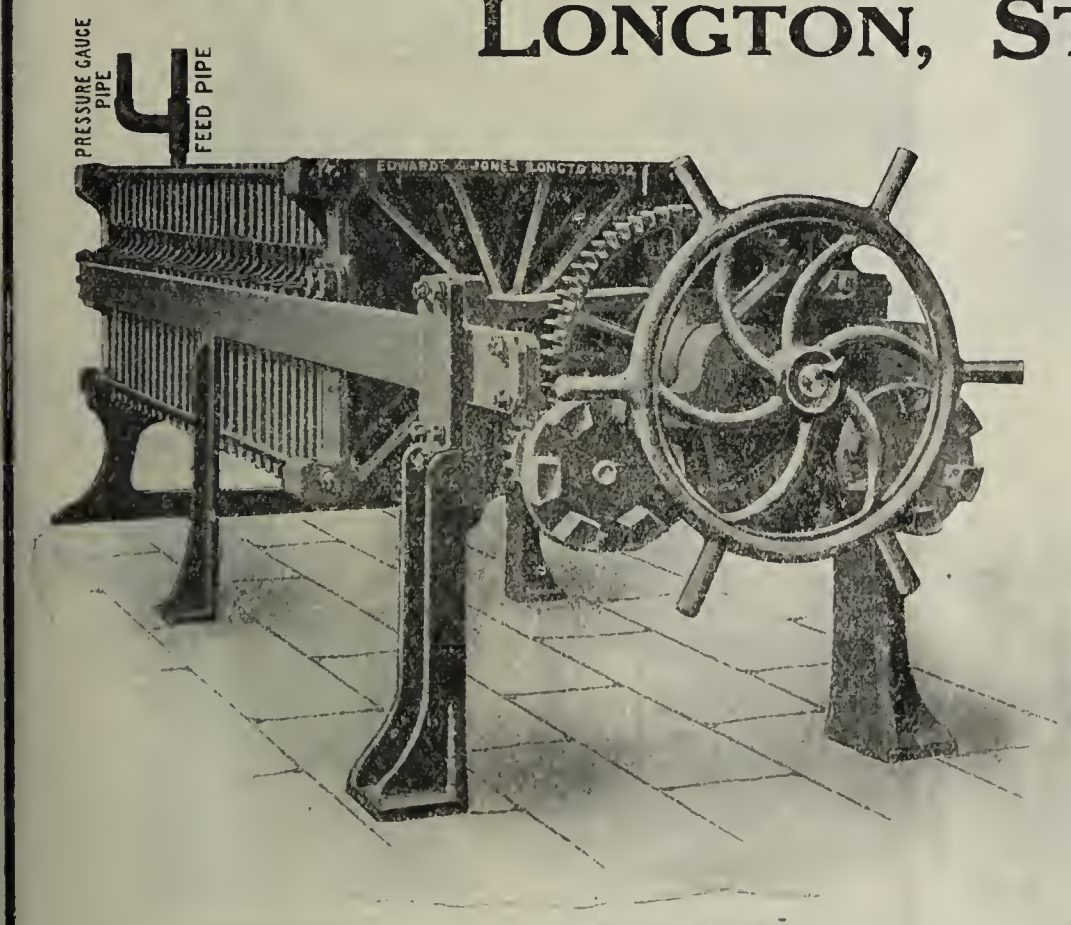
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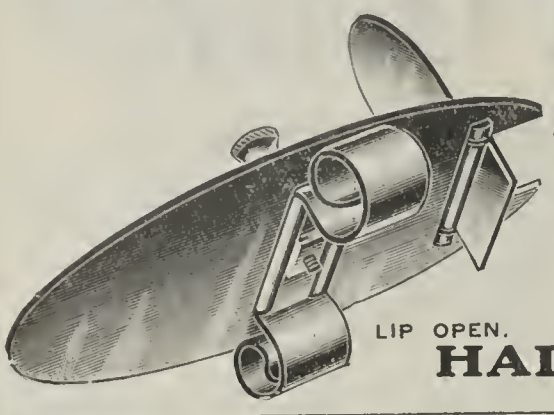
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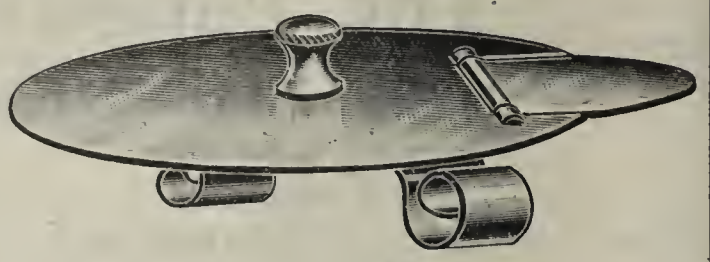
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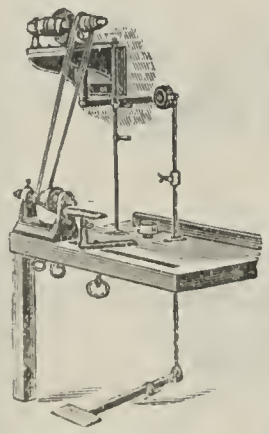
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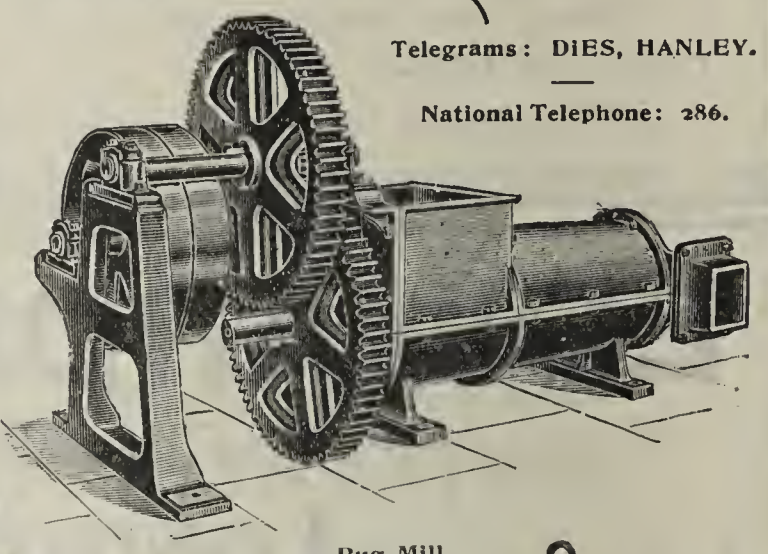


Potter's Lathe.

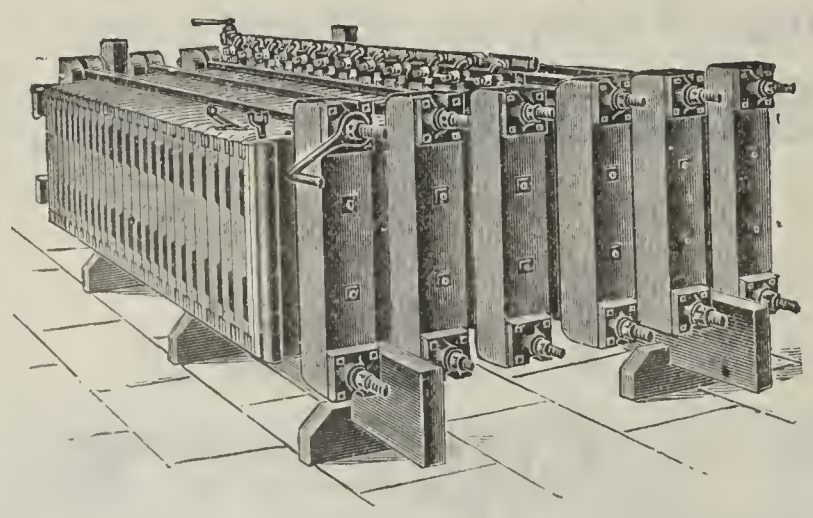
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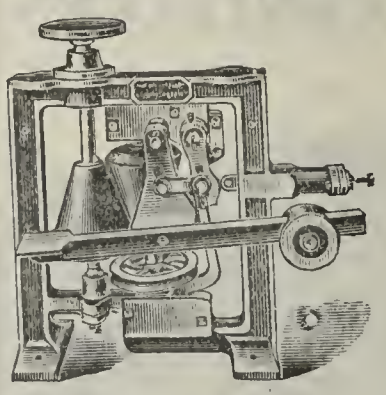
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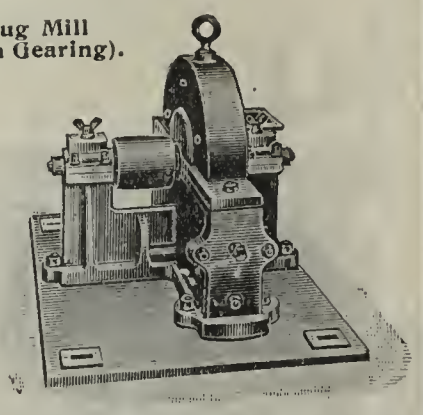


Filter Press.

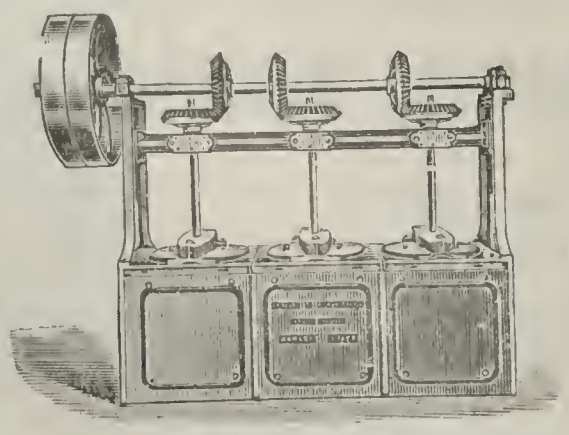


Throwing Wheel.

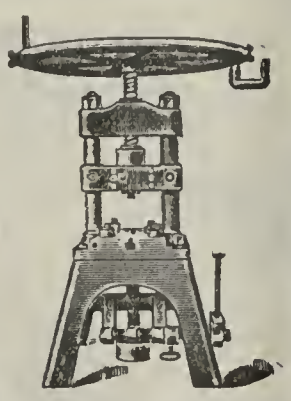
Pug Mill (with Gearing).



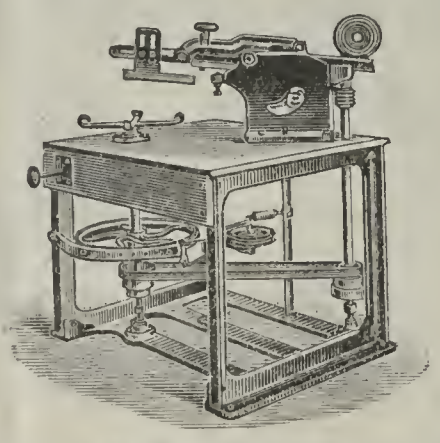
Damped Clay Disintegrator or Dust Mill.



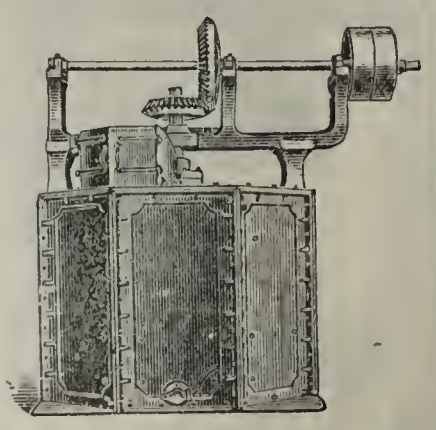
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All Advertisement alterations for the June Issue must reach us by May 23.

All announcements for this Heading for June issue must reach us by first post on May 29th.

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(CONTINUED ON PAGE 488.)

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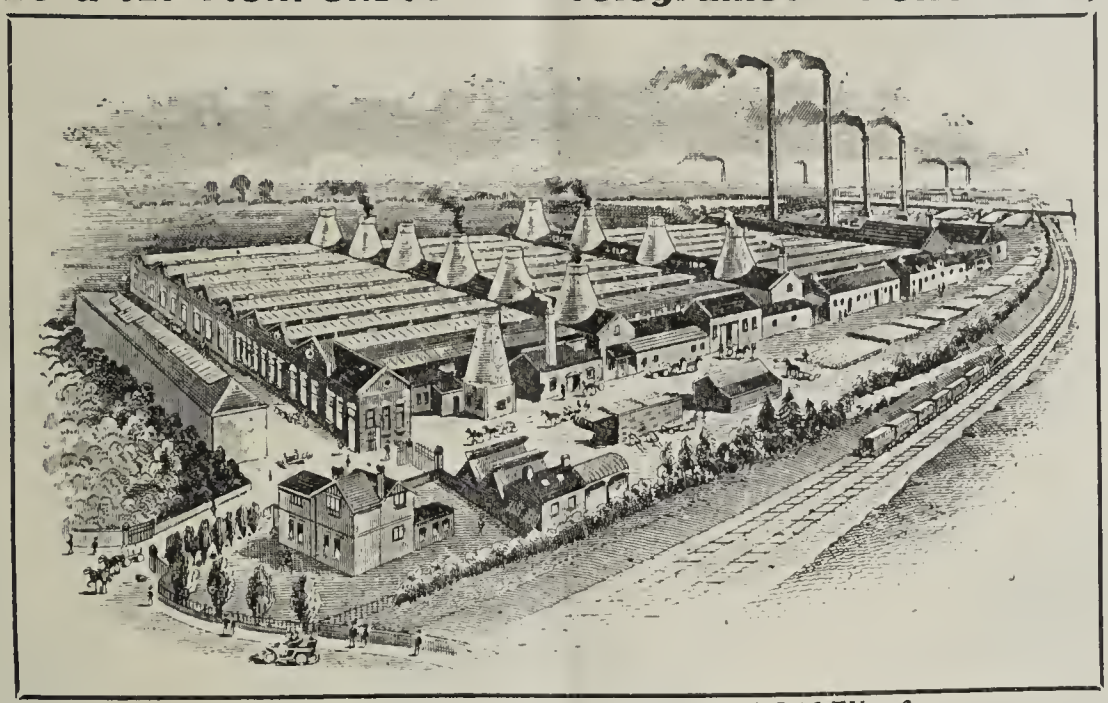
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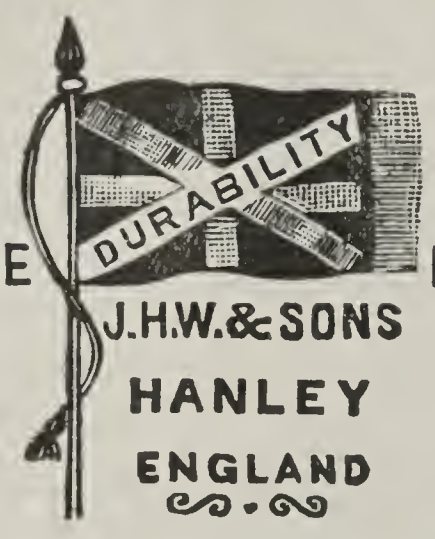
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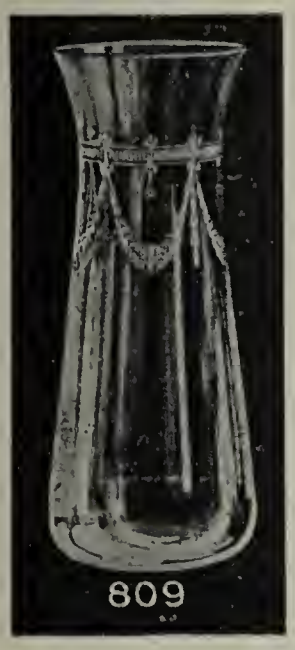
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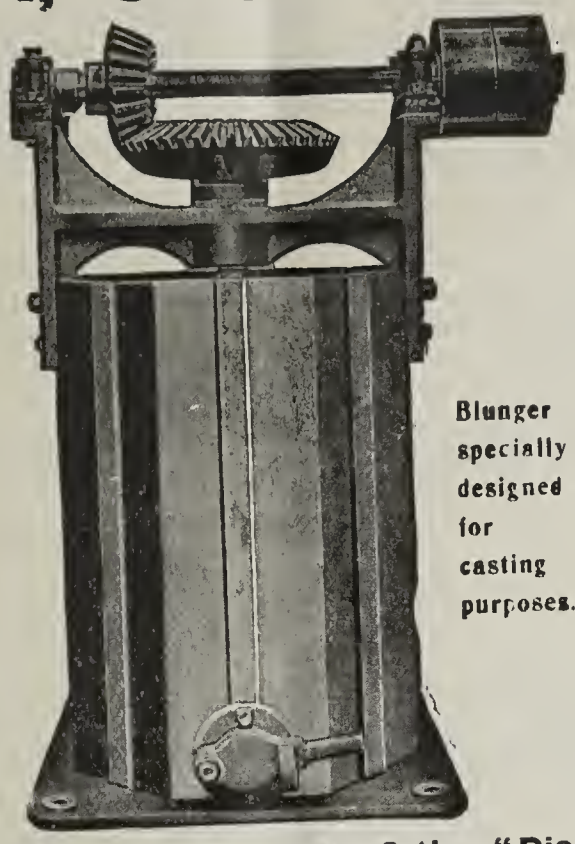
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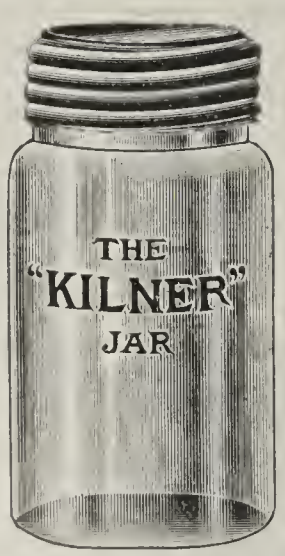
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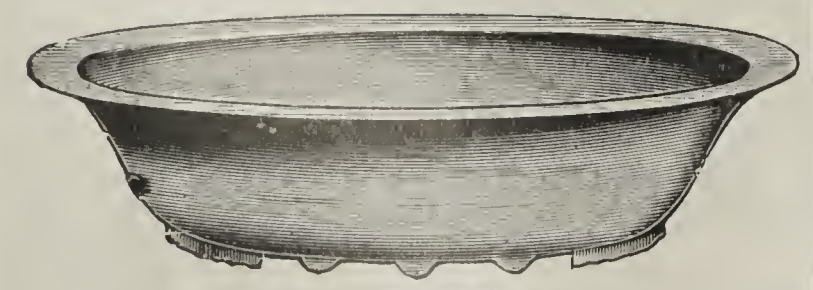
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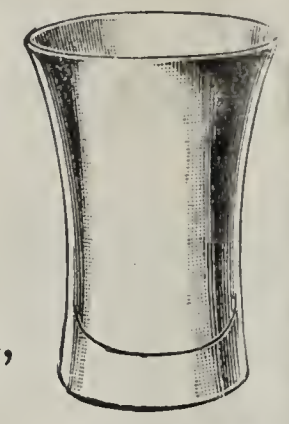
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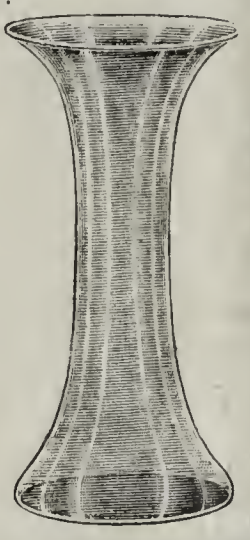
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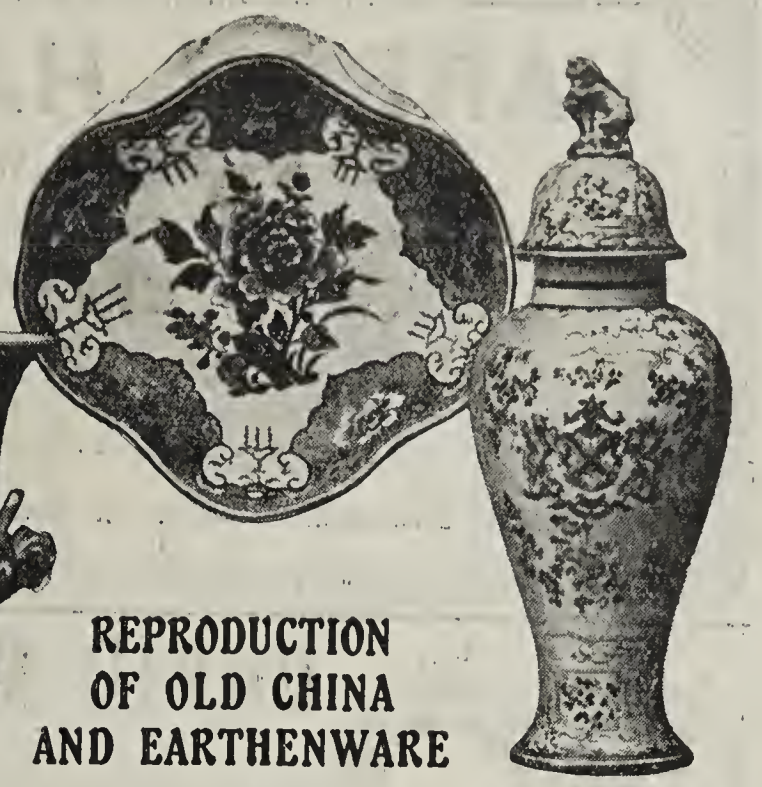
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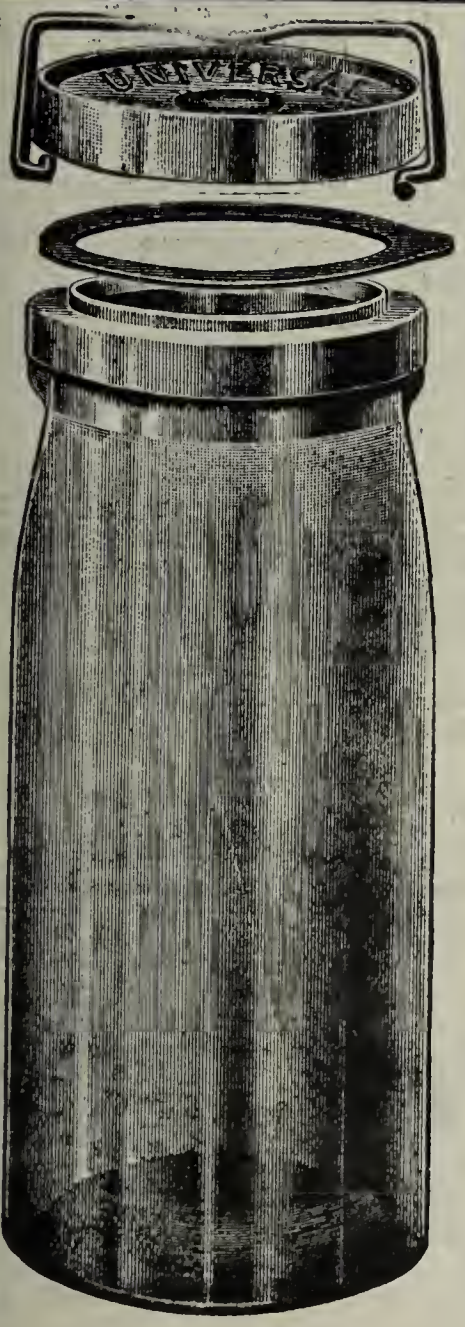




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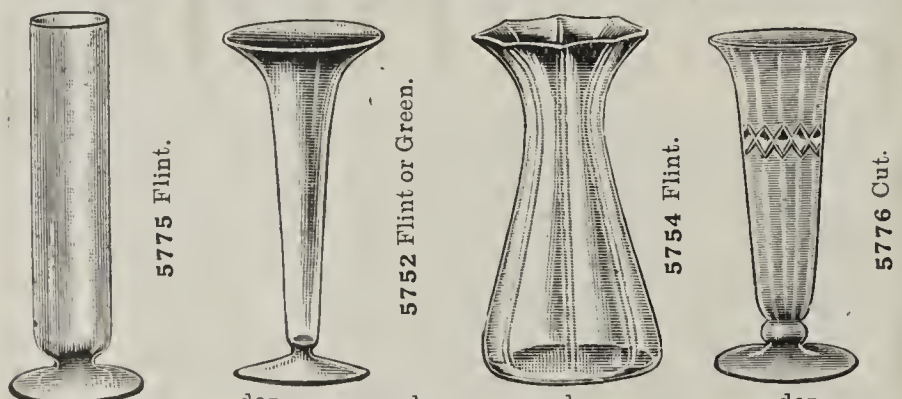
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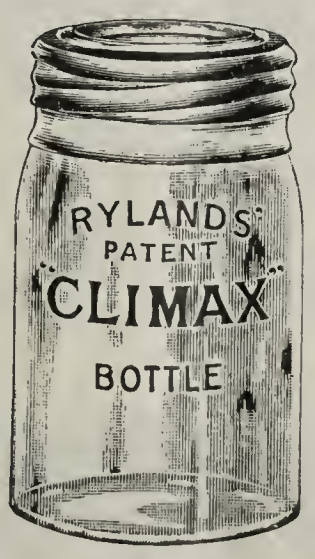
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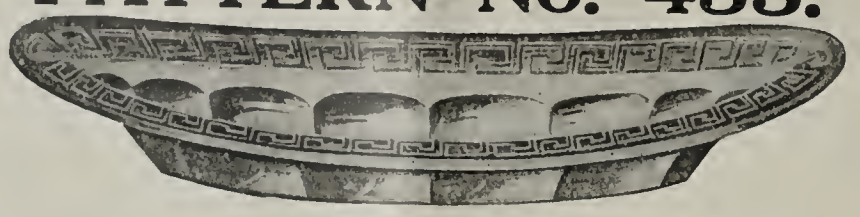
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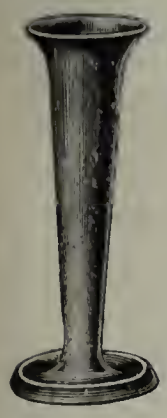
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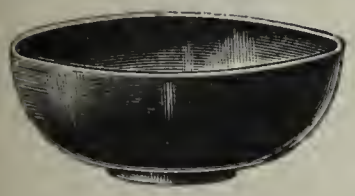
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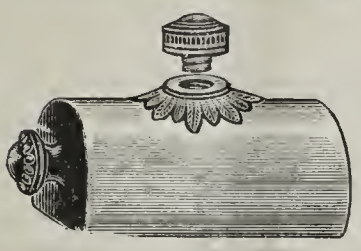


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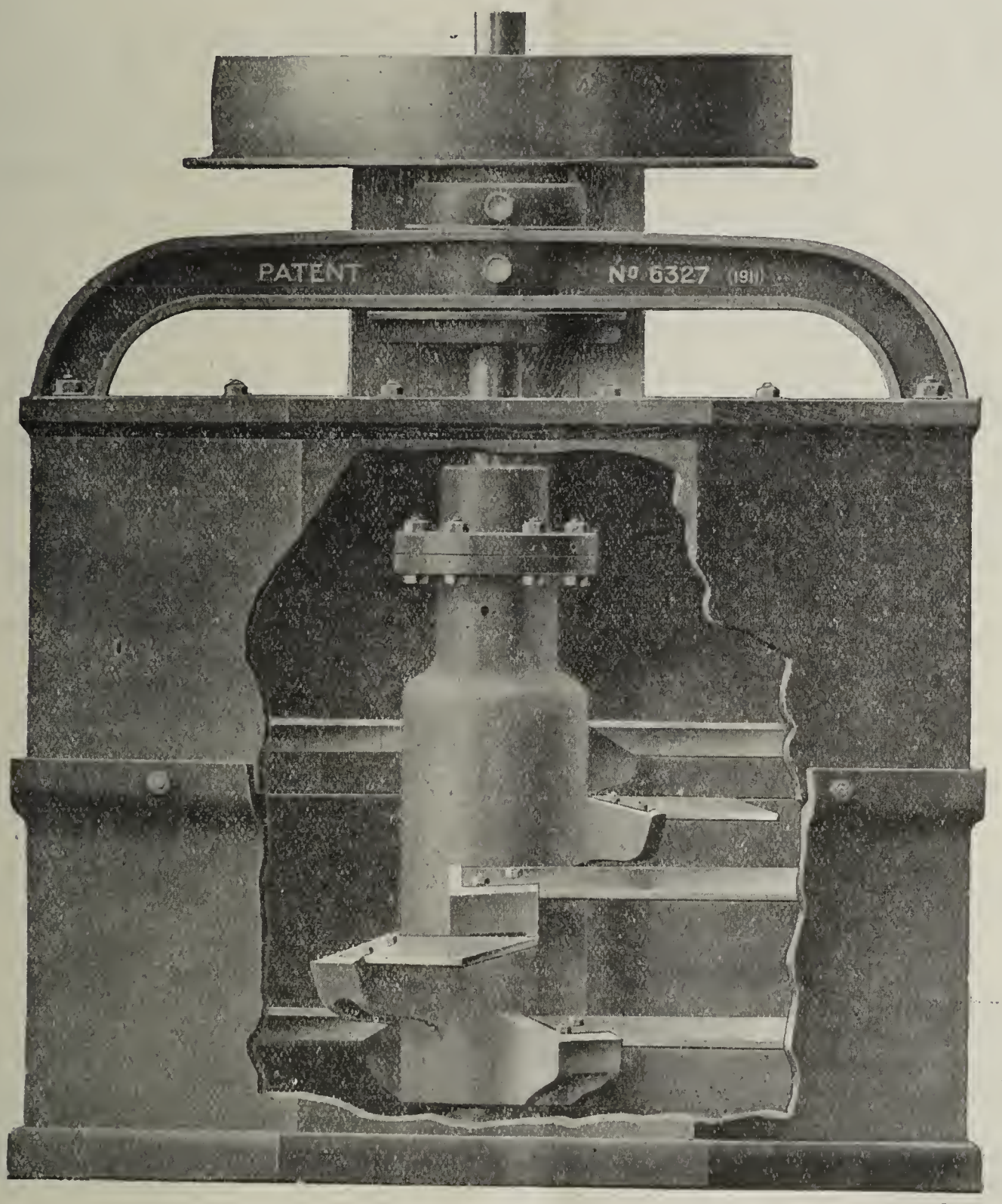
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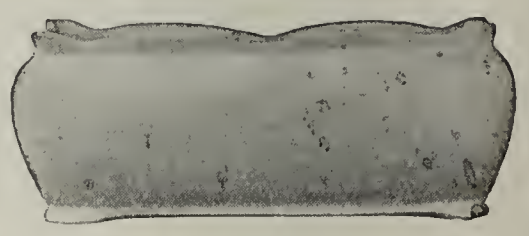
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THE ROYAL VISIT—AND AFTER.

DURING the past month the Staffordshire Potteries have received the notable honour of a visit from their Majesties the King and Queen, and have shown their loyalty by giving the Monarch and his Consort literally a Royal Reception. It is with the greatest pleasure that we have seen that His Majesty's well-known interest in British commerce extends to the pottery trade, and we trust that much good will result therefrom.

Hitherto, as we have pointed out in former Editorial Notes, the Staffordshire Potteries have figured somewhat unfavourably in the public eye. The search-light of publicity has been directed upon the less favourable aspects of the industry, and the district has suffered repeatedly from the misrepresentations of ignorant and prejudiced writers and speakers. It is possible that their Majesties' visit will mark the turning point toward a permanent change of the public view-point of the Potteries. We already perceive certain signs of grace in some of the voluminous press notices of the Visit. Although the contributors to the daily papers who deal with the Potteries are not yet free from the faults of ignorance, they have at least dried up, we hope for ever, the streams of calumny and obloquy which they were wont to pour forth. After all, the Potteries need ask for nothing more than a plain statement of fact in whatever publicity is accorded them. They require no favours, but only simple justice, and it is to be hoped that one result of the Royal Visit will be an increase of fairness in the attitude of the public towards the Potteries.

From a strictly trade point of view, we have no doubt that the Royal Visit will be turned to good account. The excellent advertisement thus afforded is being realised to the full by many manufacturers and dealers. We know of cases in which, already, special shows of the products of the Potteries district have been made in connection with the Royal Visit, and with gratifying results. We advise those of our readers who have not yet made any special effort in this direction to do so without delay. A display of suitable wares ticketed "As seen by the King and Queen," or "As patronised by Royalty," or in some similar manner, cannot fail to make a strong appeal to a large class of customers. Thus, directly or indirectly, we believe that the Royal Visit to the Potteries can be turned to advantage by almost every member of the trade.

EXPLAINING THE SPECIAL RULES.

ONE of the most curious anomalies of legislative practice is seen in the fact that laws which have to be obeyed by the general public are all too often formulated in a phraseology which is certainly not to be "understanded of the simple." The natural result is an enormous amount of litigation, with its accompanying loss of time, money and temper. The new Regulations for Potteries are, unfortunately, no exception to this rule, being set forth in such a manner that they are difficult of compre-

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hension by the plain men who are made responsible for carrying them out. Many a master and many an employee will derive from a perusal of the rules as they stand little besides a feeling of bewilderment and mystification. Yet as, in the eye of the law, "ignorance of the law is no excuse," it is necessary that in some way these regulations shall be brought within the comprehension of the most simple operative.

Fortunately for the industry, this difficulty has been recognised by one of the master minds in British potting circles. Mr. William Burton, M.A., F.C.S., has brought his great knowledge and experience to bear upon the subject, and has ravelled out the tangled skein into a form in which it may more readily be handled. With laudable generosity, he has placed the result of his labours at the disposal of his fellow-manufacturers, and has compiled the analysis of the special rules which is printed elsewhere in this issue of THE POTTERY GAZETTE. This will vastly simplify the problems which have been vexing the minds of the potters for many weeks. The Comments are to be reprinted and bound up in a handbook with a copy of the rules to which they refer. These handbooks will be obtainable from the Joint Committee of Pottery Manufacturers, and from the office of this Gazette. We trust that they will be freely taken up by potters, as their publication should prove of vast benefit to the much harassed ceramic industry.

Now one word to the pottery dealer—Do not pass over the large section of this issue which is occupied by the Comments as being merely "manufacturers' matter," with which the merchant and retailer has no concern. A study of the regulations and consideration of the labour and expense necessitated in carrying them out should materially assist all dealers to recognise the reality of the causes which tend inevitably to increase the cost of producing pottery, and, in proportion, its ultimate selling price.

IMPORTS AND EXPORTS IN MARCH.

AT a casual glance, the March exports of pottery would appear to be at an abnormally high level, amounting, in spite of the month having two working days less on account of the Easter holidays, to £275,590, as against £253,872 in the corresponding month of last year, an increase of well over £20,000. The explanation is, of course, that the first effects of the coal strike were observable in the March, 1912, returns. When compared with the same month of two years ago, when the oversea business reached £266,312, the increase is not so marked. The month's trade with the United States amounted to £38,217, and was within £600 of the Canadian business, which seems to suggest that the States may yet regain the position of our chief export customer. The American shipments were, as a matter of fact, £4,700 in advance of the same month of 1912, but £3,400 less than in 1911. The South American trade was on a lower level than during January and February, but substantially better than in the same month of last year, namely, Brazil, £24,958, compared with £18,325; Argentine, £22,885, compared with £19,923. The East Indian shipments—of the value of £22,533—were over £2,000 better than in the same month a year ago. The South African amounted to £12,236, which sum was substantially better than in February last, but only £300 over March of last year. Trade with Australia reached the not very satisfactory total of £28,852, as against £30,033 in the same month of last year, and £32,265 in the same month of 1911. The New Zealand exports have remained steady during the last three months at something over £10,000, and the March figure was only £800 over the corresponding period of a year ago.

The aggregate value for the first three months of the year was £832,740, compared with £753,237 in the corresponding period of 1912, and £745,349 in 1911. The quantities were in rather different proportion, totalling up to 974,667 cwts. for the first quarter, compared with 925,047 cwts. in the corresponding period of 1912, and 946,326 cwts. in 1911. In regard to the descriptions of the three months' exports, the most noticeable increase was in sanitary ware, the total value being £140,297, as against £115,407 in the same quarter of last year, and £106,050 in the same quarter of 1911. Earthenware and semi-porcelain represented more than half the three months' exports, being of the value of £482,598, as compared with £468,729 in the corresponding period of last year. Porcelain, china, and parian made, as usual, but a small proportion of the total, amounting to only £44,787, which, however, was substantially above the figure for the same periods of 1912 and 1911. The quarter's imports were of the value of £242,897, compared with £223,986 last year, and £230,100 two years ago.

THE KING AND THE BENEVOLENT INSTITUTION

HIS MAJESTY KING GEORGE, like his father before him, is known to be a well-wisher of all wise schemes of organised charity. We are, however, in a position to know that his favours are bestowed with the utmost care and discrimination, and are only vouchsafed to causes whose worth has been substantiated by the most thorough investigation. This renders all the more significant His Majesty's action in consenting to become Patron of the Pottery and Glass Trades Benevolent Institution, and sets a hall-mark of genuineness and utility on the work of that body which is highly gratifying to those who are engaged in conducting its affairs. We have been commissioned to express publicly the cordial appreciation of His Majesty's gracious act felt by both branches of the trade. The Board cannot but be greatly encouraged by the Royal patronage which will strengthen them in their appeals to every member of the trade, whether employer or employee, manufacturer, merchant, or retailer, to support the Institution in carrying on its useful and beneficent operations.

THE UNITED STATES TARIFF.

ONE of the most important events of the past month has been the presentation to the U.S. House of Representatives of a Bill for the revision of the Import Tariff. The Bill provides for some drastic reductions of duties, and, if passed into law, it cannot fail to have a far-reaching influence on many industries. Many of the reductions are regarded favourably on this side of the Atlantic as being likely to facilitate exportation to the States; but, on the other hand, it is recognised that the lower cost of production, due to the diminished duties on raw materials, must prove of great benefit to the United States manufacturers in competing with other countries.

Mr. Underwood, the chairman of the Ways and Means Committee, in his statement accompanying the Bill, said that the Tariff Revision Committee kept in mind the distinction between the necessities and luxuries of life, reducing the tariff burdens on necessities to the lowest points commensurate with revenue requirements, and making luxuries bear their proper portion of tariff responsibilities. Many items of manufacture controlled by monopolies have been placed on the free list.

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contains clauses providing for an income tax. It exempts all incomes below £800. Incomes in excess of that sum pay 1 per cent. up to £4,000, 2 per cent. from £4,000 to £10,000, 3 per cent. from £10,000 to £20,000, 4 per cent. about £20,000. The present Corporation Tax of 1 per cent. on corporation incomes above £1,000 is retained. The new rates of duty will be the maximum tariff. The President is authorised to negotiate reciprocity treaties, and to make concessions to countries granting favours to American exports.

The proposed reductions of duties include :—China and crockery, undecorated, 55 to 35 per cent. ; chinaware, decorated, from 60 to 55 per cent. Ordinary earthenware, which is already relatively low, being subject to an average duty of 24·67 per cent., is cut down to 15 per cent. The rates on bricks are cut down on an average from 30·23 to 10·28 per cent., tiles from 47·84 to 23·36. Window glass is given an average reduction from 46·95 to 28·31. Plate-glass, which is considered a luxury, still retains a duty of 38·45 per cent. in place of 63·95 in the old law. Cut glass and decorated glass are reduced from 60 to 45 per cent. Mirrors from between 11 and 25 cent. per square ft. to 7 and 13 cents. The duty on china clay is reduced by half. Soda and borax are to be admitted duty free. The changes are fully discussed by our potteries and glass trade correspondents in their monthly reports.

PRESENTATION TO A VETERAN GLASS-WORKER.

MR. THOMAS CARTWRIGHT, of South Bank, Brierley Hill, who recently completed sixty years of continuous employment at the glass works of Stevens & Williams, Brierley Hill, has been presented by the firm and his fellow-employees in the glass-making department, with a handsome arm-chair. A silver plate upon the chair bears the following inscription :—" Presented to Thomas Cartwright by the firm and employees of Messrs. Stevens and Williams to commemorate 60 years of faithful service at Brierley Hill Glass Works, and to mark their high esteem and appreciation of his great abilities and good qualities, Jan. 21, 1913." The presentation was made at a complimentary dinner held on March 29 at the Stewponey Hotel, Kinver. Mr. J. S. Williams-Thomas presided, supported by Messrs. H. S. Williams-Thomas, J. Northwood and T. Cartwright.

In making the presentation the chairman said that Mr. Cartwright had served under three generations, in fact, almost four, because he first came to the glass trade soon after his (the speaker's) grandfather gave up the business, but his grandfather afterwards visited the works at times, and Mr. Cartwright had often seen him. Then his (the speaker's) father took over the business, and later on he himself, and now his son, so that Mr. Cartwright had served under three masters, one Queen and two Kings. All of them had the greatest admiration for him not only for his skill as a workman—he had made some of the finest pieces of glass ever produced in this country, and which were to-day distributed in various parts of the world—but because he always took the greatest possible interest in his work, and never did any shoddy work, having a good taste for form and correct sizes, and doing his work thoroughly well. He gave his heart and soul to the work which was a pleasure to him. Nothing delighted him more than to have sent him by the late Mr. Northwood and others difficult pieces to make, and when he had accomplished them well, he felt thoroughly repaid.

In a later portion of his speech, the chairman referred to the question of the night labour of boys in glass works, saying : The Government had appointed a Departmental Committee to inquire into the night working of boys ; they wanted to increase the minimum age of boys working at nights to 16 years. This would have most disastrous results to the glass trade, and he hoped it would never come about. Not only would it destroy the opportunities of boys when they left school and after getting as high as they possibly could at school, but it would be disastrous in other ways, simply because a boy of 14 years of age would not be allowed to go into the glass trade for two years, not being able to work at night. Some of those present undoubtedly wanted to bring up their sons to the trade which their own fathers had carried on, and which they were anxious their children should carry on. After all, it was not injurious, because boys who had only just been passed by the doctor had come to them and had been put on, and in a short time they had developed, and, on attaining their manhood, had been strong and healthy. If they were to deprive them of two years of their training, how could they expect to get workmen to come up to the standard of Mr. Cartwright, who started work at the age of ten years—in 1853. Starting early in life had certainly not injured him. Considering the hours they worked, a matter of 44 hours per week, which meant that they got three days' holiday, he did not think any trade was less injurious than the glass trade. If they were to have their method of working destroyed in the way suggested by the Departmental Committee it would be a most disastrous thing for this country, because if they could not work at night, it would simply double the cost of production, and consequently throw a great many men out of employment. It would not only affect the makers, but the cutters, gilders, engravers, and others, whose work it was to decorate the work which came from the glass houses. Their trade was the most beautiful of the English trades, and he said most advisedly it was the most artistic and difficult to produce, and if such a trade was to be interfered with by men on a committee who did not understand the details, the results would be disastrous.. It was unfair that the method which had existed in this country for so many years and so advantageously should be interfered with. They wanted to see the glass houses grow and increase. To him it was a pain to think that 50 years ago there were many more going than was the case to-day, and it behoved them all to use every effort to thwart the ill-advised recommendation of the Departmental Committee.

Mr. Cartwright, whose health was heartily drunk on the proposal of the chairman, expressed his appreciation of the gift, and the honour of which he had been the recipient. The toast of " The Firm " was proposed by Mr. J. Northwood and acknowledged by Mr. H. S. Williams Thomas. Mr. W. Bridgens proposed the health of " The Chairman," who responded. An excellent programme of music was a feature of the proceedings.

Russian Municipal Brickworks.—The rise in the value of building material, particularly bricks, has strongly prompted a number of municipal authorities to provide themselves with their own building material, stores, and brickworks. In the year 1912 there were forty-five towns and one Cossack station which amongst them possessed 52 brickworks, which were run on a business basis, i.e., they sold the bricks. Only a very few towns in out-of-the-way parts (Tchluchlom, Tobolsk) were running brick works exclusively for the municipalities' use. Some of the 45 towns that exploit brick works commercially are large and well known, such as Elizabetgrad, Nishni-Novgorod, Perm, Pultava, Taganrog, Karkoffete. Similar enterprises are under consideration for Tiflis and Rostoff on the Don. The promoters of the movement generally encourage the work being done on a business paying basis, i.e., to bring in revenue to the community.


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THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE last ordinary meeting of the 1912-13 session of the English Ceramic Society was held at the Municipal Secondary School, Hanley, on Saturday, April 12. Mr. C. W. Thomas, Stourbridge, occupied the chair.

Mr. Bernard Moore contributed some very important statements on the subject of "CRAZING." This, he said, was probably the most serious trouble that could come to any pottery manufacturer, and he had hoped when he at first promised to deal with the subject to do so generally, and to make his statements as complete as possible. He had, however, found this to be quite impossible, for the subject was much too complicated and difficult to be dealt with exhaustively in the time that he had found it practicable to give to it. But at a future date, perhaps next year, if they would allow him, he would try to deal with the whole subject. For the present he would confine himself to a cause of crazing which, as far as he knew, had not been noticed, but which was, nevertheless, of great importance, and one which helped to explain much that was otherwise difficult to understand. In order to bring this clearly before them it would be necessary to attract attention to one of the primary causes of crazing, viz., the difference in coefficient of expansion between the body and the glaze. If the body, when the glaze had settled, contracted in cooling less than the glaze, the tendency of the latter was to craze. The body in this event would be in compression and the glaze in tension. By means of a diagram on the blackboard the lecturer represented the body and the glaze, a thin line representing the glaze, and a thicker line the body. This diagram was intended to illustrate how, when the thinner line became shorter than the thicker one, the glaze would have a tendency to craze. Whether crazing took place or not would, of course, depend upon other factors, such as the elasticity of the glaze, &c. On the other hand, if the contraction of the body was greater than that of the glaze then the glaze would be longer than the body, and in that event would have a tendency to peel and the body to dunt. The force exerted by this difference of contraction was really enormous. It would sometimes have the effect of bending a 6-in. tile as much as a thirty-second part of an inch. The glaze now would be in compression and the body in tension. Here again, whether peeling or dunting would ensue depended upon other factors, such as the tensile strength of the body and the firmness with which it was attached to the glaze. He did not, however, propose to deal with those principles just now. He wished particularly to draw their attention to a few facts concerned with the first example, viz., when the body contracted less than the glaze. To remedy this fault they must increase the coefficient of expansion of the body. There were, as they all knew, several ways of accomplishing this. There was no doubt, for instance, that the chemical composition of the body had a very great influence on the coefficient of expansion, and, speaking generally of pottery bodies, they would see that bodies high in silica had a big coefficient of expansion and bodies high in alumina a smaller one. They found also that the temperature at which a body was fired had an important influence, with most bodies raising the coefficient, but with certain others lowering it. Again, the size of the particle had an important bearing on the matter, as well as the variety of silica used. But these considerations by no means exhausted the subject, for two bodies made from the same materials, having the same degree of fineness so far as grinding was concerned, and fired at the same temperature and for the same time might have different coefficients of expansion. He merely mentioned these points to show how the subject bristled with difficulties. He intended to deal with the most common remedies that were employed, those put forward by Seger, viz., increasing the flint, firing harder in biscuit and more finely grinding the flints. All these measures tended to increase the coefficient of expansion. He now came to the real point of his remarks, i.e., that there was a danger of actually producing the fault if the remedy was overdone. In that case the glaze might not be crazed or peeled, but it would be in compression and the body in tension, and he might say in passing that in his own opinion most ordinary pottery bodies were of this kind. In the course of time the enormous force which was exerted in consequence of this would produce the following result :— The glaze, though neither crazed nor peeled, yielded permanently to the stress, and was no longer being compressed nor the body stretched. All assumed a state of equilibrium. If, when this state of affairs came about, the body was re-heated, say in an enamel kiln, the fact that the body had been flinted to stop crazing and had a higher coefficient of expansion than the glaze, produced a source of danger, for it tended not to reduce but to increase the liability to craze. This at the same time would explain very easily why old ware crazed particularly when re-heated, for instance glost tiles which had been exposed to heat and cold, and ware frequently washed in water. It also seemed to explain why superheating was a test for crazing. The characteristic of this type of crazing was generally long more or less isolated cracks in the glaze, though in time the finer cracks of crazing might be formed. Often one found that ware only crazed when fired in an enamel kiln. The lesson to be learned from this was that if one had crazing he must not always assume that it was due to the body having a smaller contraction in cooling than the glaze, although this was, in fact, a common fault. He must first find out to what the fault was really due, and any changes made must necessarily be gradual ones. It was easy by making drastic changes to get ware sound out of the oven, but if the remedy was overdone it might, in reality, produce the disease.

A very interesting discussion followed Mr. Moore's remarks, in which Dr. Mellor and Messrs. C. E. Ramsden, F. Jones, C. D. Grimwade, W. Jackson, G. Adams, R. Shenton, A. Heath, L. L. Grimwade, and W. Edwards took part.

The chairman remarked that he was glad at any rate that he was safe from one trouble, as he did not make any glazed ware.

"THE SPECIFIC HEAT OF FIREBRICKS" was then dealt with by Messrs. A. D. Holdcroft, S. T. Wilson, and J. W. Mellor. The object of the paper was very concisely put by Mr. Holdcroft in a few sentences written on the back of a postcard, though I understood this was merely a brief statement of the results of work which has been going on for some years by the gentlemen concerned. In several back numbers of the "Transactions" and the journals of other societies examples have occurred showing that one has hitherto always had to guess at the real specific heat of firebricks at high temperatures. The specific heat has been shown to increase in a remarkable way as the temperature rises. The authors set themselves to determine the extent of this increase by actual measurements up to 1,300 deg., which is higher than the maximum heat of the ordinary china biscuit. From data obtained from a china biscuit oven at Longton it appeared that when 9 tons 5 cwts. of coal is used, only 3 cwts. is really employed in raising the temperature of the ware, the total efficiency thus being 1·53 per cent. ! (This is a most remarkable conclusion, and well worthy of the consideration of manufacturers. At first blush it would seem to emphasise the necessity for a drastic reform in pottery firing.—EDS.

Dr. Mellor afterwards dealt with the subject of "NICKEL COLOURS," in the authorship of which paper Messrs. H. Wicks and F. W. T Mayer joined. He pointed out that some years ago his attention had been drawn to the fact that a blue colour was obtained when nickel was used as a colouring agent in a glaze containing much zinc. He was so interested in this, and the colour was such an unusual one that he thought the fact was worth looking into. To overcome the idea that the result was obtained from cobalt in the nickel, he took precautions to get the nickel as free from cobalt as practicable, and he still got a peculiar steel blue from it. Nickel had got rather a bad name in the Potteries, he thought, as a colouring agent, as it was considered to be so unreliable. There was, however, a peculiar method in its madness, and experiments he (Dr. Mellor) had made showed that by reducing the lead in a glaze of the formula he gave, and introducing zinc, the blue line in the colour gradually ran up. Other colouring oxides were then tried in a similar way, and quite a series of tints were obtained, all of which will be recorded in the "Transactions." It was really remarkable how many colours it was possible to get from nickel. He wished to show that nickel was not so unreliable as was generally thought. There was a method in its working, and that method was determined by the combination of the glaze. From commercial nickel it was possible to get a fine old blue without any cobalt whatever.

Mr. J. A. Audley made an important addition to Dr. Mellor's remarks in relation to leadless glazes, and Messrs. C. E. Ramsden and R. H. H. Jones also spoke on the subject.

An important letter was read which had been addressed to the Secretary by the Secretary of the American Ceramic Society, as follows :—

"The American Ceramic Society at its last meeting discussed quite carefully and at much length the desirability of recognising in some complimentary way the foreign ceramic organisations most closely similar to our own. After the discussion our rules were amended so as to create two classes of honorary members, the first class to consist of foreign ceramic societies, who should be represented by their President, and the second class to constitute persons of eminence in ceramics, as provided in our former rules.

"This proposed legislation was carried through by the unanimous consent of the Society, and our rules were so amended. At subsequent sessions the name of your society was placed in nomination for honorary membership, and the rules were suspended, and the ballot was cast at that time, resulting in an unanimous election.

"It gives me great pleasure to communicate this intelligence to you. It seems to me a fitting expression of goodwill which our society bears towards your society, and recognition of the valuable contributions to the technology of silicate industries which have come from your organisation. We feel that in paying this compliment to your organisation we are merely extending an international courtesy, which should have been done long before.

"In the forthcoming volume of our 'Transactions' (No. 15), which we hope will appear during the summer, there will appear on

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It was resolved that this should be placed upon the agenda to be dealt with at the next meeting, which will be the annual general meeting, when the officers will be elected for the forthcoming session, and the balance-sheet and Presidential Address received. This meeting will be held at Hanley on Saturday, May 3.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are taken from the April issue of the Board of Trade "Labour Gazette":—

THE POTTERY TRADES.—Employment in the pottery trades continued good on the whole.

Branches.	Number employed.	Wages paid.
China manufacture	3,395	£3,808
Earthenware manufacture ...	12,265	11,652
Other branches (including unspecified)	3,573	3,346
Total	19,233	£18,806

Districts.	Number employed.	Wages paid.
Potteries	14,512	£13,694
Other districts...	4,721	5,112
Total	19,233	£18,806

Returns from firms employing 19,233 workpeople in the week ended March 15 showed a decline of 0·4 per cent. in the number employed, and of 0·2 per cent. in the amount of wages paid, compared with February. As compared with March, 1912, when the trade was totally disorganised by the coal strike, there was an increase of 201·2 per cent. in the number employed, and of 225·5 per cent. in the amount of wages paid. In the Potteries employment was good generally in the china trade, and fairly good in the earthenware trades. Employment in South Yorkshire showed a decline on the previous month; at Bristol and at Bridgwater it was good. It was also good in Scotland, and slightly better than in the previous month.

THE GLASS TRADES.—Employment generally continued fairly good, and was much better than a year ago, when many works (especially bottle-making works) were wholly or partially idle in consequence of the coal strike. Returns received from firms employing 7,951 workpeople in the week ended March 15 showed a decrease of 2·4 per cent. in the number employed, and of 1·6 per cent. in the amount of wages paid, compared with the week ended Feb. 22. Compared with a year ago there was an increase of 42·3 per cent. in the number employed, and of 85·4 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,671	£7,967
Flint glassware (not bottles) ...	1,621	1,904
Other branches...	659	773
Total	7,951	£10,644

Districts.	Number employed.	Wages paid.
North of England	804	£1,043
Yorkshire	4,681	6,536
Lancashire	527 .....,	699
Worcestershire & Warwickshire	843	1,039
Scotland	777	1,008
Other parts of United Kingdom	319	319
Total	7,951	£10,644

Employment in the glass bottle trade in Yorkshire was good in the flint glass section, and fair in other sections. At Barnsley, however, it was reported as only moderate, and at Mexborough as bad. At Wakefield works were still idle for repairs. At St. Helens employment was moderate, and not so good as a month ago. It continued good at Sunderland, Portobello, and Bristol. With sheet glass flatteners at St. Helens employment was moderate; with sheet and plate glass workers it was good. At Birmingham it continued fair with flint glass makers, moderate with flint glass cutters, and good with plate glass bevellers. It continued good with flint glass makers and cutters in the Wordsley and Stourbridge district, only moderate with pressed glass makers on the Tyne and Wear, and fair with glass blowers in London.

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Goods of all kinds included in Class 15. Porcelain and earthenware. Class 16. Zirkonglas G.m.b.H., Weissfrauenhof, Frankfurt a/Main, Germany. Address for service in the United Kingdom is, c o Marks & Clerk, 57 - 58, Lincoln's Inn Fields, W.C.

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346,429 and 346,430.

346,427 and 346,428.

"INDRA."—347,649. Glass reflectors and glass distributors for electric light. Class 15. The Electrical Engineering & Equipment Co., Ltd., 109 and 111, New Oxford-street, W.C.



348,158. All electrical goods included in Class 16. Voigt & Haeffner (England), Ltd., 95, Colmore - row, Birmingham. March 5, 1913.

GERRESGLASS.—348,816. All goods included in Class 15. A. G. der Gerresheimer Glashüttenwerke vorm. Ferd. Heye, Düsseldorf-Gerresheim, Germany. Address for service in the United Kingdom is, c/o Hubers & Mond, 19, Southampton-buildings, Chancery-lane, W.C.

AUR.—349,060. Glass ware included in Class 15 for electric, gas, acetylene, and other lighting purposes. The Welsbach Light Co., Ltd., Welsbach House, 344 to 354, Gray's Inn-rd., King's Cross.

BIJOU.—349,323. Vacuum bottles in various shapes and sizes made wholly or chiefly of glass. Class 15. G. O. Henninger, 11, Great James-st., W.C.

PARAMONT.—349,950. Globes and chimneys of glass for incandescent gas lighting. Class 15. S. Reich & Co., 15, Clerkenwell-rd., E.C.

DURAMANT.—350,410. Sanitary and domestic earthenware goods included in Class 16. Twyfords, Ltd., Cliffe Vale Potteries, Hanley.



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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

E. Hughes & Co., Opal China Works, Fenton, are represented in London by Mr. J. H. Service, at 21, Charterhouse-street, E.C. They specialise in china, tea and breakfast ware, and have some captivating patterns on the tables at the present time. We show in the accompanying illustration four particularly good teas and saucers. The "Isis" (low flanged shape) has a neat green border decoration, finished off in burnished gold; the "Oxford" (tall flanged) has a mazarine blue dontelle edge, with festoons of flowers naturally coloured and handles treated in burnished gold; the "Eldon" (tall flanged can) has a gold band and black key border with neat coloured festoon border below; and the low "George" shape has baskets of flowers in mazarine blue, red and gold, with a green garland connecting the baskets. These, of course, are only four of numerous capitally designed patterns, and it was really difficult to know what to select for illustration from such a fine selection. Hughes & Co. make china of a really good body, and they stock quite a number of different shapes in white tea and breakfast ware, amongst which should be mentioned the "George," "Eldon," "Oxford," and "Isis," already referred to, and the "Clematis," "Blyth," "Marie," and "Louis." These can be promptly supplied also with burnished gold edges or handle. Jugs, teapots, and sugars and creams are made to match the different shapes, and with burnished gold edge or solid gold handle they look extremely well. Hughes & Co. have a very good market for china jugs in white and gold edge and solid green handle, and they make six sizes, both covered and uncovered, in either plain or fluted. Their "Churn" shape jug is also made in six sizes, and is quite a favourite. All the jugs mentioned can be had with metal mounts. Milk sets (jug and two tumblers) are offered in all sorts of patterns, and morning sets and coffee sets on china tray are a regular line of their orders. In china sets of better class they have an excellent range; in fact, the samples grade in easy stages from the cheapest priced services to richly decorated patterns with burnished gold finishes. Their "Rosemary" has proved very popular, and is on show in a full variety of tints. They run a stock line of reproductions of Lowestoft and Louis XVI. decorations, and I understand they sell exceedingly well. The old Chinese Dragon decoration is also supplied both in blue and green. View and arms ware is supplied in tea ware and fancies, and the arms of any towns or cities are accessible. White and gold edge line and sprig china is a stock line with Hughes & Co., and they have heavy demands to meet in badged china of all kinds. The firm makes a boast of the quality of its china, and certainly the samples shown in Mr. Service's rooms are of a high order and would repay an inspection.

Tooth & Co., Ltd., Bretby Art Pottery, Woodville, are to be congratulated upon the admirable and unique display they have now on show at their London house, 15, Charterhouse-street, and at the showroom of the factory, both of which the writer has had the pleasure of inspecting within the last few days. Mr. Gamage, their courteous London representative, allowed me to take a few particulars of their newest lines and the impressions I formed while at his City rooms were strongly fortified when I visited Woodville. They have a remarkably good show just now of their well-known specialities —pedestals and pots, vases, plaques, jardinières, umbrella stands, tobacco jars, toilets, trinkets, bulb bowls, &c. Among the recently installed decorations, an extremely fine one is the "Polished Granite," and certainly the name has not been indiscriminately chosen, for the effect is truly that of a piece of ground, smoothed and polished granite, the artist having struck the copy to a nicety. The design is shown in a wide range of articles, and some of the larger pieces are elegantly relieved with the firm's characteristic dull bronze, showing up the granite effect wonderfully well in panels. Contrast and variety is secured by treating some of the pieces similarly as to decoration, but with silver instead of bronze. Quite a number of new art shades are to be seen in the self-coloured glazes, and amongst these rose du Barri, heliotrope and saxe blue play a prominent part, especially in the direction of flower-pots and bulb bowls. It is interesting to



[*Photo. by "The Pottery Gazette."*

E. HUGHES & CO.

CHIPPENDALE

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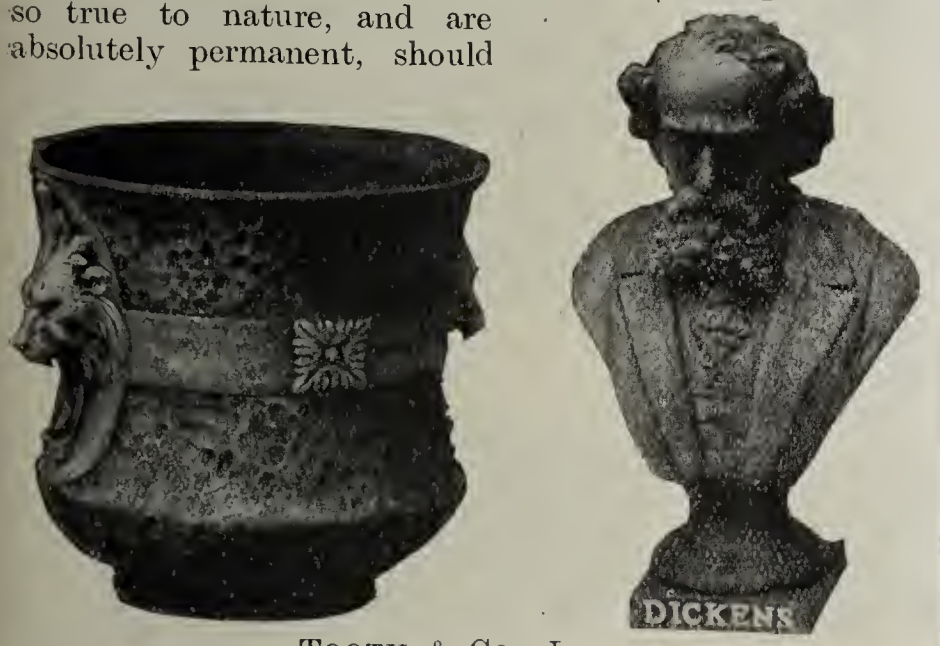
C. J. PRATT (NATIONAL GLASS CO.),
1, CHARTERHOUSE STREET,
HOLBORN CIRCUS, LONDON.

notice that Tooth & Co. have recently embarked upon the manufacture of toiletware, and are showing this in the self colours already referred to. A very novel double-handled ewer, having a handle both at top and side, the top handle having the appearance of having been riveted on to the top of the ewer, should, we think, find its market, and, of course, this can be had in any of the new art colours. An illustration of a six piece set of this novel shape is here shown. It should also be noticed that trinket ware can be supplied to match any of their toilets.

We have previously commented upon this firm's bronze and bronze and jewelled ware, to which, since we last wrote, they have made many additions, and which we understand have had a remarkable run. In fact, so successful has this decoration been that a number of imitations have been attempted at a cheap price, and which met with a certain demand. To meet this, and at the urgent request of a large number of traders, who expressed their preference for British made goods, Tooth & Co. have introduced a new line, known as the "Delhi," which covers a variety of metal effects, and the sales of which have been phenomenal. Although a comparatively cheap line, the firm makes a point of it that the articles shall be of good finish and quality. An illustration we here print shows one of their latest pieces in this decoration. I was also shown a number of new lines in what has now become a standard production of Tooth & Co., viz., "Carved Bamboo." The very nature of this production naturally confines the imagination of the designer within certain limits, but one has only to look at the clever modelling to be convinced that the artist has realised its fullest possibilities. This, coupled with the fact that the colours employed are so true to nature, and are absolutely permanent, should secure a continued demand for a line which possesses such distinct decorative merits. In the "Cloisonné" ware I saw some interesting developments. Hitherto they have confined the background of this deservedly popular decoration to what I should describe as a matt black or dulled ebony, relieved by hand-painted birds and blossoms. The effect is most suitable for the embellishment of modern furnishings, and in some new creations Tooth & Co. have hit upon some beautiful shades, including pink, pink and green, turquoise and Royal Chinese yellow, all of which form pleasing groundwork for subsequent relief by hand-painted birds of rich exotic plumage amidst foliage of exquisite tropical hues, resulting in productions which are really highly artistic in their conceptions, suitable alike for drawing or dining room. In their "Carved Ivory and Ebony" ware the subjects on the ivory ground are taken from the Japanese legendary, and are as unique as they are artistic. A new line in busts, particularly of Dickens, Shakespeare, Scott and Burns—truly capitally chosen as a literary quartette—is now being made in the firm's distinctive earthenware. The effect is that of a carved ivory head, surmounting a solid black base or plinth. The ivory is very light on the face and head, and gradually tones heavier towards the neck and shoulder, until, by the time the plinth is reached, the colour has evolved into a distinct brown. The idea is extremely good, and offers a relief to the parian bust which, for a time at least, has fallen somewhat flat. A triumph of modelling is seen in their new lion's head plant pot, and it presents quite a diversion from the mathematically conventional shapes which are so prominent just now. They have on show a new shape flowerpot, No. 2,117, which strikes one as being of capital form, and although this is certainly somewhat severe in outline, and absolutely devoid of any ornamentation in the way of embossment, it is, nevertheless, a shape which possesses a graceful charm, and in some of the beautiful art shades in which it is presented should make a strong appeal to the trade. The popular "Ligna" decoration is still being shown extensively, and frequently recurs in the daily indents. Several new designs in umbrella stands with plain glazes and relieved with metal effects are prominent in the rooms, and bulb bowls, for which Tooth & Co. are famous, are displayed ad infinitim. The firm's warehouses are a real surprise to anyone who sees them for the first time, for they contain a wonderfully assorted stock. One large warehouse at Bretby is devoted entirely to bulb bowls, and these range from a variety of plain coloured glazes up to "Carved Ivory," natural basket effects and other high-class and fairly expensive designs. They have a well equipped factory; the workshops are light and airy, and one would imagine that the new regulations in regard to ventilation, and aiming at improved hygienic conditions for the workers, will cause such a firm as the one under notice but very little uneasiness. We can confidently recommend a call at Mr. Gamage's room in Charterhouse-street.



TOOTH & CO., LTD.



TOOTH & CO., LTD.

Taylor & Kent, Florence Works, Longton. — In several ways this firm have achieved considerable distinction during the last few years, and for a long time to come their name will be associated with the Coronation and Wallasey. Their heraldic wares are so well known that it would, perhaps, be a waste of time to more than mention them just here. We therefore select four of their popular teas and saucers for illustration. Of these the "Fife"

shape, No. 4,028, is a favourite, and it is specially suitable for a medium class trade. The pattern is a Grecian key border, on a best gold band, with festoons of pink roses below. The set has solid gold handles, and is throughout finished in best gold. Two other designs are, as will be seen, illustrated on the same shape, these being Nos. 4,121 and "Hendon" respectively. The former is a very pretty set, finished in hair brown, with tinted pink roses. It is a departure from the new art styles, and is proving very popular. The latter is a charming print, and can be had in any colour. The remaining cup and saucer is of the "Gem" shape, and of the number 4,108. It is a style of printed tea set much in demand, can be had in any colour, and we should imagine will be a sure seller. The London showroom of the firm is at 16, Hatton-garden, E.C., where a fine range of samples is on show.



[*Photo. by "The Pottery Gazette."*

TAYLOR & KENT, LONGTON.

Mr. Arthur Wood, Bradwell Works, Longport, has built up a good connection, particularly in teapots, which he manufactures extensively, and at Green Bros.' rooms, 49, Hatton-garden, E.C., some capital lines, many of them distinctly new, are to be seen. Specially to be noticed amongst these is the "Silustria," a reproduction of the ancient silver "Resist" on the old shapes suiting the decoration so well. The background is silver lustre, on which some quaint designs are well shown up in white relief. Quite a range of this particular ware is on show, and we illustrate, amongst a few other lines, two pieces of it. The "Cauliflower" design is another novel introduction, supplied particularly in teapots and hot water jugs. In this design the white flower effect is secured by a suitable embossment, rendered more realistic by an application of green. It is very suitable to the present style of antique house furnishing, and the ancient idea has been well grasped in the production of the design. It is interesting just here to mention that at the recent sale of the Solon collection, teapots of this design of the



[*Photo. by "The Pottery Gazette."*

MR. A. WOOD.

early Staffordshire make, attributed to Whieldon about 1750, were sold for £8 each, whilst coffee pots of the same decoration brought more than double that figure. We illustrate a teapot and hot water jug, which, however, it is very difficult to reproduce in a photograph. In coloured glazes there are some distinctly good lines. A new "Claret" glaze, supplied right through in teapots, hot water jugs, coffee jugs, coffee pots, and sugars and creams, is a glaze of warm and pleasing appearance, and should have a good sale. Our illustration shows one of the most popular shapes of teapots being supplied in this particular glaze. Mr. Wood's green glaze ware enjoys a good sale, and the sunk handle teapot shown in our illustration is very suitable for restaurant use. This shape is supplied in any of the glazes for which Mr. Wood lays himself out. A new turquoise glaze has recently been introduced, samples of which are now to be seen at Green Bros.' rooms. The all-over silver lustre teapots are still going well, and chased silver ware can be had in wide variety. In mentioning lustres I ought to point out that tinued at will. The pot is made principally in Rockingham, mottled and dark green, although other decorations are available. The "Ideal" teapot, with a removable earthenware strainer, is also made under patent rights by Mr. Wood, and the "Hygienic" teapot is another of his specialities.

Jackson & Gosling, Grosvenor Works, Gregory-street, Longton, are makers of china for the million, and lay themselves out to supply all sorts of useful domestic china of a good quality at competitive prices. They have been in the business for half a century, their trade having been established by the father of the present partner, Mr. B. J. Jackson, who himself has been with the firm for 42 years. In order to devote themselves entirely to manufacturing useful lines on a thoroughly commercial basis they have never interested themselves in ornamentals and side lines, their staple trade having remained table china in almost everything that may be required, dinner ware only excepted. They employ some 200 hands at the Grosvenor Works on these bread and butter lines, and



[*Photo. by "The Pottery Gazette."*

JACKSON & GOSLING.

the claret, green, and turquoise glazes already referred to can all be had, if desired, with silver lustre mounts, giving them a finished appearance. Specially to be noticed also is some solid blue ground ware, with an over-laid pattern in white enamel. This is a reproduction of salt glaze made as far back as 1740. The colour of the blue and the freedom of the raised white enamel brushwork produce a decorative result which is well worthy of encouragement. This decoration is supplied in a variety of articles, all of which are thrown and turned on the old lines and finished by hand in order to secure almost perfect reproduction. A new line is on show also in pink lustre ware, with the spouts and handles of teapots dealt with in best solid gold. The same treatment with purple and silver lustres gives a good combination. Mr. Wood is responsible for the manufacture of the patent "S.Y.P." (simple yet perfect) teapot, which has two compartments separated by a perforated grid. The tea-leaves are placed in the upper one, and the water poured on the leaves. The infusion of the tea in this pot can be stopped or con-

consequently one may assume that they are able to get down to rock-bottom costs. It is often the multiplicity of lines which an individual potter or decorator has to handle which makes it impossible to give an employer competitive prices. This cannot be said to be a factor in the business of Jackson & Gosling. They reproduce designs of Lowestoft, Chelsea, Swansea, Nantgarw, Rockingham, &c., and have numerous patterns which have long enjoyed a good sale. The firm does not by any means stand still, for every month they are bringing out something fresh. Amongst the latest of their introductions is the Bourbon Sprig design, a naturally coloured cornflower, emulating a French design which at one time played a very important part. This pattern is exclusively manufactured by Jackson & Gosling, and is already being ordered from them in considerable volume. We illustrate a number of pieces in this decoration, which are well worthy of being inspected from their representatives. Mr. F. J. Ray, one of the partners, and Mr. H. Hammond are working the country generally between them, the latter

having recently been appointed in consequence of a rapid extension of their trade, which has made it impossible for Mr. Ray, as heretofore, to control the whole of the representation of the British Isles. The firm's trade is not, however, confined to this country, for they enjoy a fair share of exportation, and have recently appointed a resident agent to watch their interests in the Australian market. This last-named agency has been entrusted to Mr. A. B. Waller, Gloucester House, 396, Flinders-lane, Melbourne. We can confidently recommend those dealers who may not yet have sampled Jackson & Gosling's lines to take an early opportunity of seeing their representatives, who frequently visit the City and the important provincial centres.

Thomas Forester & Sons, Ltd., Phœnix Works, Longton, are so well known, both at home and abroad, as extensive manufacturers of ornamental goods in great variety, that it is almost superfluous to introduce them by prefatory remarks, but it will be of general interest to know that they are not standing still, or living at present upon a reputation which they have deservedly won in the past. Two calls recently made by the writer, the one at their comparatively new showroom, 102, Hatton-garden, E.C., and the other at their factory in Longton, might, therefore, well be placed on record. As a matter of fact the first call led me to make the second, because, after seeing their excellent show in London, I felt that I should like to see the source of some of their wonderful productions. They have always been noted for a magnificent range of goods at very popular prices, and as time goes on their assortment is all the while becoming more complete. One of their newest lines is the "Bohemian", ware, which strives, not unsuccessfully, after a rouge flambé ground, relieved by white slip-painted storks and black lotus leafage, the design being an imposing creation, which receives a final embellishment of green and gold. I think I should be safe in saying that I have seen nothing of a similar kind in the trade, and as it is supplied in the full range of ornamentals they make, which conveys a good deal, one has ample scope to test its marketable value. Another decoration which is having a very good run is the "Hawthorn," a hand-painted blackbird in different positions, surrounded by coloured foliage. The necks of the vases at the hands of the decorators come in for a slip ground treatment which, suitably finished off in gold, looks really fine. The "Magnolia" ware is also proving a very successful pattern. It has deep jasper blue panels on the neck and foot, the remaining portion consisting of a naturally coloured magnolia flower on a white vellum ground, finished off in best burnished gold. The effect produced by the jasper panels is alone sufficient to create a favourable impression, but in conjunction with a harmoniously chosen flower such as the one allocated to it, it is peculiarly charming, and should certainly prove one of Forester & Sons' best lines this season. The "Berries" pattern is somewhat similar in effect, having a groundwork of similar type, but with blackberries in natural colours as the predominating subject, and an embossed leafage relief on foot and neck in a delicate shade of green. The general effect is further improved by a fine gold shading, and the pattern being finished off in best burnished gold gives the dealer confidence in offering it for sale, which may be said of the majority of Forester & Sons' decorations. Their new "Chrysanthemum" pattern takes the form of hand painted flowers on a pleasing celadon ground, the neck and foot of the vases being given a maize relief and a fine gold finish. The "Paris" decoration, also a good seller, has large pink roses on an ivory ground, with neck and foot of old gold, relieved with a gold diaper print, the knob and handles of the vase being treated in dull gold in thorough keeping with the rest of the decoration. Their "Royal Albert" and "Grecian" patterns in Worcester shadings are amongst other new lines, and are well represented at the present time in the rooms. The "Lotus" ware has naturally painted lotus flowers on a white vellum ground, with dark leaves traced in platinum and gold, and the flowers shaded at the back with fine gold. One by no means completes the story in saying that they have also some very new lines in slip-painted ware, and one special stand in the showroom at the works is set out with this style of decoration, principally in dark colours accentuated by light brown and gold finishes. They are constantly introducing new shapes and decorations, all aiming at giving their productions a wider scope and popularity. They are now fixing up at the works an auxiliary showroom to the spacious one now employed for their ornamentals, in order to show to better effect, and in a self-contained way, their china tea sets, of which they have a good range at moderate to fairly high prices. Amongst some of the latter are gold prints, acid gold borders, and mazarine and ruby bands with acid



[*Photo. by "The Pottery Gazette."*

THOMAS FORESTER & SONS, LTD.

gold finishes. We illustrate two pieces of their "Magnolia" ware previously described, the numbers being 5094 and 5095, also a centre vase of the "Paris" decoration, No. 5091/1. It should be mentioned that Mr. Walter Lane, who is well known in the trade, has recently been appointed their London representative and manager in succession to the late Mr. E. Morgan Jones.

CONCILIATION IN THE POTTERY AND GLASS TRADES.

THE tenth report of the Board of Trade on the proceedings under the Conciliation Act, 1896, dealing with the year 1912, which has just been issued, contains the following particulars :—

Glass Bottle Workers, Newcastle-on-Tyne.—A stoppage of work of about 20 glass bottle workers having commenced on Jan. 15, 1912, owing to the refusal of the firm to allow the men to join a trade union, on Feb. 3 application was made on behalf of the workpeople for the assistance of the Department in bringing about a settlement of the dispute. After inquiry had been made the workpeople were informed that it did not appear that the Department could usefully take any further action in the matter.

Pottery Turners, Glasgow.—On Jan. 8, 1912, the secretary of the National Amalgamated Society of Male and Female Pottery Workers made application to the Scottish stoneware manufacturers for various alterations in the prices paid for turning certain articles. The matter was brought before a meeting of the Conciliation Board, in accordance with an agreement between the parties, and on March 15, the Conciliation Board being unable to come to a settlement, joint application was made by the parties for the appointment of an arbiter to determine the matters in dispute. Professor Richard Lodge, the arbiter appointed to deal with the matter, issued his award on May 28, deciding that the current payments to stoneware turners for piecework, whether determined by past arbitrations or by agreements of the Conciliation Board, or by use and wont, should remain unaltered, the demand for the general and all-round increase in the payments for piecework as advanced on behalf of the workpeople not having been justified in his opinion. As regards time-workers, the arbiter awarded an increased wage, fixing the rate at 36s. per week of 60 working hours.

Pottery Workers, Glasgow.—The Scottish Rockingham ware Conciliation Board being unable to agree on the following matters, joint application was made on Nov. 9, 1912, in accordance with the rules of the Conciliation Board, for the appointment of an arbiter to decide the matters in dispute. The questions were :—(1) Are the men entitled to the alterations contained in their notice of July 19, 1912 ? (2) Are the kilnmen at the Caledonian pottery entitled to the alterations contained in their notice of Feb. 16, 1912 ? In response to the application, the Chief Industrial Commissioner appointed Professor Richard Lodge to act as arbiter. At the commencement of the arbitration proceedings the arbiter was informed that the masters and men concurred—

> "In asking the arbiter to treat the men's claim as an application for a general advance in wages of 15 per cent., and an advance to turners on the low paid teapot-covers, which shall be in future 3½d. for deep, and 3d. for shallow, covers. The general advance to apply to throwers, jiggerers, spoutmakers and handlers, and to be based upon the present customs of use and wont in the Scottish potteries. The men's claim is otherwise withdrawn, except with regard to the kilnmen's claim."

Later in the proceedings the last claim was settled by agreement between the parties as follows :—

> "It is agreed to meet the kilnmen by the Caledonian Pottery Company giving 3s. per kiln advance, the men guaranteeing the filling of the kilns to the company's satisfaction, thus bringing the Caledonian into line with the Eagle Pottery, to date from to-day, Dec. 13, 1912."

On the other points the arbiter awarded :—(1) That there shall be an advance of wages to throwers, jiggerers, turners, spoutmakers, and handlers of 5 per cent. ; (2) that the above advance shall apply only to Rockingham ware, and not to jet, samian, or any other ware ; (3) that the above advance shall be made on the first pay-day in January, 1913, and thenceforward ; (4) that, apart from the above advance, there shall be no change in the payments to turners for teapot covers, and that the payments shall be 2d. for shallow, and 3d. for deep, covers.

CANADIAN GLASS IMPORTS.

CANADIAN imports of glass during the six months ending September, 1912, were made up as follows, according to a return just published :—Glass and manufactures of balls and cut, pressed or moulded, crystal glass tableware, blown glass tableware, and other cut glassware : United Kingdom, $23,664 ($24,551) ; United States, $227,264 ($177,358) ; Austria-Hungary, $26,941 ($18,881) ; Belgium, $17,921 ($16,621) ; Germany, $36,349 ($23,992) ; other countries, $16,801 ($12,716) — totals, $348,940 ($274,119). Carboys or demijohns, bottles, decanters, flasks, jars, and phials : United Kingdom, $43,343 ($49,750) ; United States, $210,475 ($140,982) ; Austria-Hungary, $7,307 ($3,160) ; Belgium, $3,189 ; Germany, $28,298 ($37,427) ; Holland, $7,021 ($7,924) ; other countries, $3,539 ($13,345)—totals, $303,172 ($252,588).

Common and colourless window glass and plain coloured, opaque, stained or tinted or muffled glass, in sheets : United Kingdom, $275,273 ($184,468) ; United States, $131,624 ($28,965) ; Belgium, $380,791 ($428,888) ; other countries, $6,330 ($3,717)—totals, $794,018 ($646,038).

Lamp chimneys, glass shades or globes : United Kingdom, $3,901 ($2,510) ; United States, $161,590 ($128,782) ; Austria-Hungary, $8,242 ($6,657) ; Germany, $18,257 ($15,262) ; other countries, $981 ($255)—totals, $192,971 ($153,466).

Plate glass, not bevelled, in sheets or panes : United Kingdom, $300,895 ($251,113) ; United States, $36,301 ($24,360) ; Belgium, $218,950 ($131,379) ; France, $7,543 ($26,948) ; other countries, $12,283 ($3,439)—totals, $575,972 ($437,239).

Glass, other : United Kingdom, $111,726 ($70,654) ; United States, $220,086 ($142,773) ; Germany, $37,231 ($31,566) ; other countries, $73,965 ($81,037) ;—totals, $443,008 ($326,030).

Recapitulation.—Glass and manufactures of : United Kingdom, $758,802 ($583,046) ; United States, $987,240 ($643,220) ; other countries, $911,939 ($863,214)—totals, $2,658,081 ($2,089,480).

The figures in brackets show the imports for the corresponding period of 1911. The substantial increase in the imports of all items from the United States is worthy of special notice.

Earthenware manufacturers in the United Kingdom might find an opening for their goods in the Dominican Republic, according to a recent British Consular Report.



THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

(BY ONE OF OUR STAFF.)

(*Continued from page* 418.)

XIII.—SELFRIDGE & CO., LTD., OXFORD STREET, W.

IT will be within the knowledge of many of our readers that Oxford-street, one of the most ancient thoroughfares of London, has by one of "Time's revenges" become the scene of operations of a firm whose aim is in all things to be ultra-modern and supremely up-to-date. Four years ago Selfridge & Co., Ltd., opened an establishment there with the object of adapting the main ideas of the American Department Store to British, and especially to London, requirements. They have found that their enterprise has "caught on," and the result has been a store which is neither distinctively American nor entirely English. It is just "Selfridge." Probably the more extreme of the American methods of drawing custom would have had no attraction for the West-End public, but Selfridge & Co., Ltd., have introduced an American flavour, as it were, into their dealings, which is not without piquancy and has certainly appealed forcibly in many ways to British taste.

On visiting the establishment of Selfridge & Co., Ltd., early in April for the purpose of viewing the china and glass department, the writer was conducted through the main sections of the Store by the buyer for that department, Mr. Wood, who very courteously pointed out some of its most novel features. The building is by no means a "sky-scraper," as London regulations do not admit of the erection of these amazing structures; but it covers a large area, and the five floors above ground and three underground afford ample scope for the display of a great amount of ingenuity and organisation. On the roof are to be found a tea garden, a miniature rifle range, and a net-encased green (carpet) for golf practice, all surmounted by an observation tower. From this highest point to the engine-room three storeys underground, the active life of the whole establishment is linked up and controlled by a telephone system comprising 171 telephones and 40 Exchange lines. Over the many clocks in the various departments are fixed multi-coloured electric lamps, by means of which a code of signalling is carried on throughout the building. The various floors are served by 10 passenger lifts, besides which there is one reserved especially for the staff and two for goods traffic. There are also five stone staircases, chiefly for use in case of fire, though the plentiful extinguishing appliances suggest that any outbreak would be promptly checked.



PART OF THE CHINA DEPARTMENT: SELFRIDGE & CO., LTD.

Strolling from floor to floor I noticed that the various departments were carefully kept distinct and yet so arranged that each was linked up with others of a kindred nature. How they can help one another at need is shown by the fact that the excellent views illustrating this article were taken by the photography department. The large number of assistants, principally of "the gentler sex," in attendance was very noticeable; but all are instructed not to attempt to sell goods to anyone who has not inquired for them. It is thus possible to pass through the whole building without making a purchase, though it is extremely improbable that this would be the case, as the wares are everywhere set out in a most attractive manner.

The china and glass department occupies a gallery around the lighting well on the third floor, immediately below the big glazed skylight. It adjoins the comfortable

lounge which Selfridge & Co., Ltd., place at the disposal of their customers and also the branch post office, the instalment of which caused a good deal of excitement, as being an unusually smart move. Besides pottery and glass the department includes ornamental metal ware of pewter, antimony, bronze, &c., but these are not unduly in evidence.

The wares are set out in cases or on stands, mostly varnished a dead black, which forms a good contrast to the white table cloths or paper sheets upon which the various pieces are arranged. There are also one or two mahogany fixtures, and the formality of the whole is agreeably broken up by the presence of a number of occasional tables, such as are common in modern drawing-rooms. These lend themselves admirably to the purpose of displaying the smaller, lighter and more artistic ware, and make up to some extent for the absence of a furniture department in which the pieces could be shown "in situ." Glass shelves and pillars are used with good effect to form the "upper storeys" of the stands.

A general survey of the stock produced an impression of an extremely wide range being covered. Selfridge & Co., Ltd., advertise their business to "the million," and they have to provide for "the million" accordingly. They have an excellent selection of choice and costly articles, but also plenty of cheaper, by which we mean low priced but not necessarily inferior, goods. I noticed half a case occupied by fine Worcester porcelain, the neighbouring half case containing some beautiful Coalport ware. Near by was a small collection of the delicate egg-shell Belleek ware, which is, I am told, very popular with American visitors. A good number of handsome Doulton jardinières were also to be seen, with a few pieces of the inimitable products of Copenhagen. On a tiny table was set out some decorative Dutch pottery, of a kind not often seen in London. Among the other decorative ware I may mention a quantity of Thuringian imitations of Dresden porcelain figures, candelabra, &c., and a small corner table bearing blue and white oriental vases.

One of the largest stands was loaded with an imposing array of vases, &c., in Wedgwood, jasper and basalt, among them being one of the famous reproductions of the Portland Vase. This display was particularly appropriate, as a scheme of the decoration in Wedgwood style was at the time being employed in many of the departments, producing particularly pretty effects in the ground floor windows. All the 21 windows were representative of the different colours in which Wedgwood china is made, such as peach green, black basalt, Wedgwood blue, lilacs, helio, reseda green, &c., each one in a different colour. Facsimiles of the subjects generally employed on the staple lines of Wedgwood were executed in plaster bas-relief as backgrounds. All the felts used in these windows were dyed as near as possible to the colours of pieces of Wedgwood ware sent to the dyers. The interiors were decorated in keeping with the windows, and Wedgwood figures were applied to the 22 columns as well as to two huge vases and pedestals 18 ft. high containing imitation cherry blossom.



GLASS DEPARTMENT: SELFRIDGE & CO., LTD.

The utilitarian side of the pottery business was by no means neglected. Plenty of good lines in dinner, tea and breakfast ware were to be seen, and in connection with some of these a novel system has lately been put into force. On one of the largest stands a well-written display card bore the notice:—"Insured china: A new departure. All breakages in these standard patterns, dinner services, breakfast services, tea and dessert services, toilet ware, replaced at half original cost within 12 months from date of purchase." The customer who buys goods under this system receives a coupon corresponding with the counter foil in one of the Company's books, and if, within a year of the date when the purchase is effected, any piece is

broken, it is replaced by the firm at half price, on the coupon being presented. Selfridge & Co., Ltd., are enabled to carry out this scheme by the fact that they have about a score of stock patterns to draw upon. They do not, however, undertake to supply all replacements from stock, and their customers are informed that when goods have to be made, manufacturers usually take from 5 to 8 weeks. The system is being extensively advertised, and so far has proved highly successful.

Along one side of the gallery (on the right hand of the photograph) was shown a varied collection of dainty coffee services of well-known British and Continental makes. These were set out in a very attractive manner, and were evidently in great request among the customers. Good displays of toilet ware were made on two or three of the tables, some of the latest types being highly artistic. Jugs and ewers were also placed on the tops of some of the side cases, sharing this accommodation with art flower pots. One whole table was devoted to the display of French fireproof ware and casseroles.

The glassware occupies one side of the gallery, and, like the pottery, covers an extensive range. "Best English Cut Glass" is announced on several cards; indeed English wares are given prominence throughout the department. In a central position at the time of my visit was a stand of the finest Stourbridge cut glass rose bowls and flower vases. An adjacent wall case contained a numerous assortment of tumblers, wine glasses, &c., all en suite. At one end of the gallery was displayed a representative assemblage of heavy American pressed glass vases, dishes and candlesticks of the purest metal. Behind this were a couple of rows of giant glass trumpet vases, the tallest being 51 ins. high. Close at hand were a few glass toilet sets, which, I was told, are proving quite a popular line. Richly decorated French and Bohemian glass were also to be seen, and a particularly good business is done in small plain glassware trays, dishes, &c., suitable for presents or souvenirs.

Some general impressions gathered by my survey of this well managed department may here be set forth.

The everyday virtues of freedom from dust and disorder are well observed, plenty of help being available. More distinctive is the breaking up of the displays into small sections rather than massing them. This is quite an American notion, and it is practised to an even greater extent in the New York stores. The rule for assistants, "Don't speak unless you're spoken to" gives the store somewhat of the atmosphere of an exhibition; were it not so full of active life it might be compared to a museum.

Well written tickets, harmonising with the now familiar Selfridge advertising tone, are freely used. The frequently recurring ticket "As Advertised" exemplified how Selfridge & Co., Ltd., rely for their success upon well directed advertising schemes, backed up by the supplying of goods strictly in accordance with the statements contained in the advertisements. An admirable feature is the plain pricing of every piece of ware, so that a potential customer can see at a glance whether the figure is suitable, without being put to the trouble of making inquiries.

Another excellent custom is the relegating of the cheap goods, or, as the company euphoniously term them, inexpensive articles, to the bargain basement. This applies to all departments, but it is especially useful in the case of china and glass, where the neighbourhood of crude and inferior wares often detract from the appearance and selling value of the finer articles. A long counter in the bargain basement, with a range of shelves behind, are occupied by "odd lots," "job lines," and so on, both in pottery and glass, priced at very tempting figures, and a large and profitable daily turnover results, the terms being strictly cash.

Lower still, in a sub-basement, is the ample storage space where packing and unpacking is carried on. Mr. Wood's department, for obvious reasons, is unable to share the advantages of the pneumatic tubes which are employed to convey parcels from all parts of the building to the despatching department. In the packing-rooms, an excellent safeguard against fire is provided by iron bins into which loose straw and paper can be quickly cleared up.

My visit was paid on the fourth anniversary of the opening of the Store. (Souvenir packets of silkworm's eggs were being presented to customers, a novel and pretty idea.) It is therefore appropriate that this article should conclude by wishing Mr. Wood and his department "Many happy returns."

Obituary.

MR. JOHN BAWDEN, Aged 89.

THE death of Mr. John Bawden, which occurred at Aylmer Place, St. Austell, on April 2, has deprived the West of England and Great Beam China Clay Co., Ltd., of its oldest director. Deceased was born in the village of Sticker, some three miles distant from St. Austell, nearly ninety years ago.



[*Photo. by J. H. Coath, Liskeard.*
MR. JOHN BAWDEN.

Mr. Bawden married a daughter of the late Captain Thomas Maynard, of Sticker, who was one of the pioneers, with the late Mr. Thomas Stocker, in the china clay industry of the neighbourhood, and did much to aid the development of the well-known West of England China Clay Co. When Captain Maynard died his interest was transferred to his daughter and her husband. Since then the company has developed to very large dimensions, dealing with over 200,000 tons of china clay per annum. Mr. Bawden took a great interest in the industry, and until his health became impaired was rarely absent from its business meetings. In addition to this the deceased was a director of the St. Austell Gas Co., and for a period of eleven years was its chairman. He was also a member of the old St. Austell Local Board for 20 years. He was one of the founders of the East-hill United Methodist Free Church, and for 40 years acted as a superintendent of the Sunday school. He has been a generous supporter to many religious institutions of the town.

The funeral took place in the St. Austell Cemetery on April 7 in the presence of a large and sympathetic gathering. The West of England and Great Beam China Clay Co., Ltd., was represented by Mr. Henry Stocker (managing director), Mr. G. H. Grenfell (general secretary), Messrs. M. F. Hitchins, J. R. Gaved, A. S. Hitchins, and Captain P. Peters.

MR. HENRY EVANS, Aged 89.

WE regret to announce the death, on April 19, of Mr. Henry Evans, late of the Cauldon-place Works, Stoke-on-Trent, the veteran groundlayer, who for nearly the whole of his business career was engaged in that admittedly dangerous process of pottery decoration. Three years ago we gave an extended account of his long connection with the Cauldon-place factory, and a few of the facts are well worth repeating here. Originally training under the late Mr. John Ridgway, the former owner of the faetory, the late Mr. Evans spent seventy years in the service of the concern, during the greater part of which time he was engaged "in the lead."

Up to the time of his retirement, only twelve months ago, he enjoyed comparatively good health, which he always attributed to his personal cleanliness and the enjoyment of unlimited fresh air, a good deal of the latter being secured in the pursuit of his favourite sport—angling. The deceased gentleman was a highly respected figure at the Cauldon-place Works. He was a gifted worker, and played a part in the production of many pieces which have become famous not only in the annals of Cauldon-place but of ceramic advance generally. Some of his best work was put into the magnificent pair of vases for which Mr. John Ridgway received the commands of her late Majesty Queen Victoria. In view of his advancing age, the directors of Cauldon-place decided last year to extend to Mr. Evans a pension to enable him to spend the remainder of his days in ease. It is to be regretted that he did not enjoy this for a much longer period, but possibly after such an active life as that to which he had been accustomed the reaction of a retired life was too severe for him, as so often proves to be the case in such advancing years.

The funeral took place at the Hartshill Cemetery on April 24. Choice floral tributes were sent from the deceased's fellow-workers and the officials of Cauldon, Ltd., the managing director, Mr. Fredk. T. Moore, and Mr. F. Bullock representing the company at the interment.

Captain VICTOR HENRY GOSS, Aged 47.

IT is with deep regret that we record the death of Captain Victor Henry Goss, of Oulton Rocks, Stone, Staffs., senior member of the celebrated firm of manufacturers of Goss Heraldic wares. The deceased gentleman met with his death with tragic suddenness on Mareh 27, as the result of being thrown from his horse whilst riding past Strongford, near Trentham, and from the evidence at the inquest of an eye-witness of the distressing accident, it would appear that there is little doubt that the horse not only threw its rider, but afterwards kicked him in its flight. The injured gentleman was removed with every care to Strongford Farm, but despite the medical attention of Drs. Fernie and Hind, expired very shortly afterwards, death being due to his having sustained a fraetured skull. The news was reeeived throughout the whole of North Staffordshire with much consternation, and the sympathy of everyone has gone out to the family in their irreparable loss, and more so, because of the fact that the late Captain Goss only survived his father but a little time. As a public man, the deceased played a by no means unimportant part. For a number of years he was Captain of the old Stoke Company of Volunteers, and, offering his services to his country on the outbreak of the Boer War, he proceeded to South Africa, and returned holding the rank of Honorary Lieutenant. In 1910 he was elected to the Potteries Federated Council as a representative for Stoke, and continued his representation on that body until the time of his death. In his capacity as Councillor, Captain Goss was a member of the Highways and Plans Committee, the Public Libraries Committee, the Baths, Markets and Fairs Committee, and the Finance Sub-Committee. He was also a Freemason. He was exceedingly popular as a citizen, and possessing a handsome and genial personality was held in the highest esteem by all who knew him. The military funeral, which took place on March 31, at Hartshill Cemetery, was exceedingly impressive. The cortège started from Oulton, accompanied by members of the Stone Police force in charge of Supt. Gilbride, and was joined at the entrance to the Falcon Works in Edwards-street by the military, Corporation officials, and the workpeople. From thence to the Hartshill Cemetery it was headed by mounted members of the Stoke Constabulary, the E Company of the 5th Batt. North Staffs. Regt. (Territorial Force) and the Battalion band. The interment took place with full military honours, and to the accompaniment of general mourning, the Vicars of Oulton and Acton officiating. The whole of the route from the Falcon Works to the cemetery was lined with sympathetic crowds, and the event was marked by most impressive scenes, many recognising that they had lost a good friend. We join in condoling with the family of the deccased, and in the deep regret which is everywhere felt at the sad and untimely end of a revered and prominent figure in the potting trade.



[Photo. by R. Simpson, Alsager.

CAPTAIN V. H. GOSS.

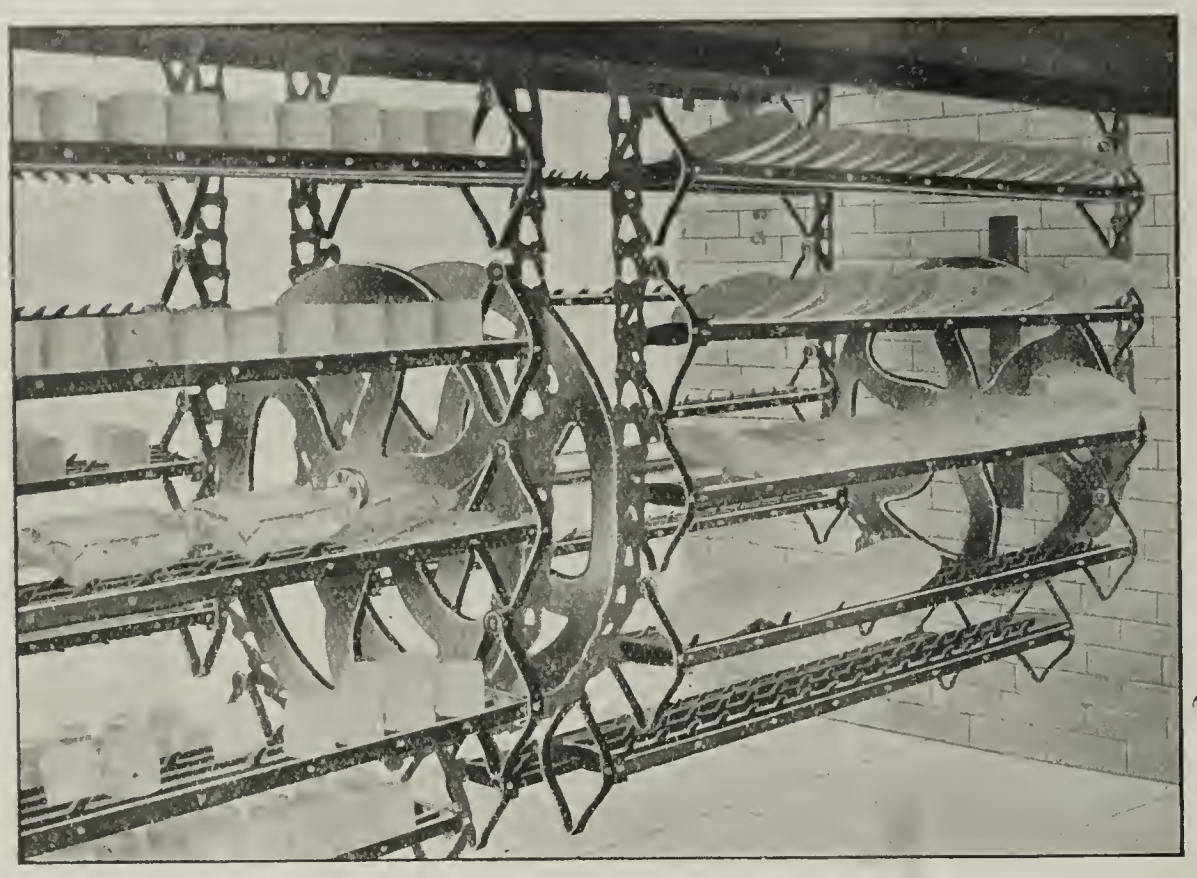
Belgian Glassworkers to the number of nearly 30,000 took part in the universal strike on the suffrage question which was concluded at the end of April.

Pottery and Glass in Persia.—A British Consular Report from Yezd states that the imports of lamps and crockery are mainly German and Austro-Hungarian. Better kinds with metal or porcelain containers, somewhat gaudy. Smaller kinds of hand lamps, with glass or porcelain containers. Hurricane lanterns, for use in the unlighted streets at night, are to a certain extent coming into use. Candle lamps (lalehs), with bulb or bell-shaped shades, clear or frosted, from Germany and Austria-Hungary. Lamp chimneys and globes mainly German and Austro-Hungarian, the former being as a rule of very cheap, inferior qualities. Tea glasses, mainly from Russia, but a few, like small champagne tumblers, and engraved, have been brought from Bombay. Glass water-pipe containers from Austria-Hungary and Russia. China teapots, mainly from Russia on indents of local merchants. Window glass of cheap Continental qualities, and of very uneven thickness, is procured vi Bunder Abbas as a rule. The last consignment, however, owing to the state of that road, was procured viâ Ahwaz and Ispahan, with very considerably more breakages in transit. The demand is almost exclusively in the town, the villagers not yet having reached the luxury of windows or glass doors. The imports of chinaware, glassware and window glass, more particularly the last, would appear to have been considerably less than the average of recent years, the diminution being mainly attributable to the insecurity on the roads.

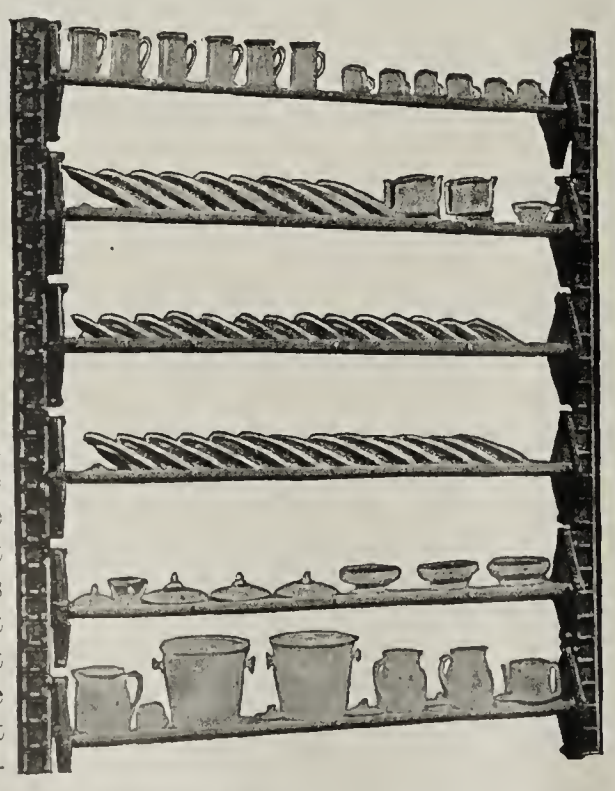
MANUFACTURERS' ACCESSORIES.

(BY OUR OWN REPRESENTATIVE.)

THOS. WILLETT & CO., Victoria Foundry, Burslem, potters' merchants, iron and brass founders, millwrights, and tool manufacturers, in keeping with the experience of other local firms engaged in a similar business, were found busily engaged, but, nevertheless, I was very courteously received by Mr. Willett, who was not averse to telling me what I desired to know. They deal with all kinds of potters' machinery, fitting up factory equipments complete. Their trade, similarly to that of other local potters' engineers, is not confined to the locality in which the business is situated, although, of course, they do much of their business with the local manufacturers. It is interesting to note that they supply their machinery to countries as far away as America and India, whilst they regularly maintain a good trade with the potters of France and Germany. Amongst the latest improvements for which Willett & Co. are responsible is their double patent vertical dippers' drying tower or mangle with reversible skeleton shelves, of which we are pleased to give an illustration. It is claimed for this installation that it secures great economy in space and building, and at the same time provides a perfectly efficient drying system. The arrangement has been adopted by some of the largest firms, and has proved a really successful accomplishment. The smaller illustration shows the skeleton shelf as distinct and separate from the mangle.



DOUBLE PATENT VERTICAL DIPPERS DRYING MANGLE WITH REVERSIBLE SKELETON SHELVES.



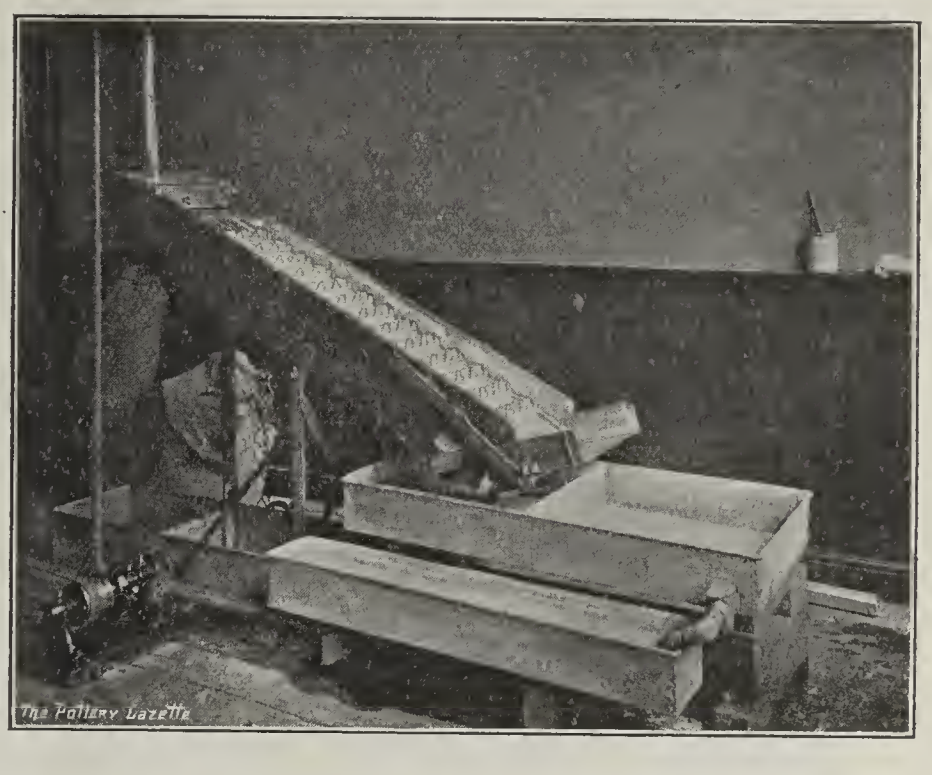
PATENT IMPROVED REVERSIBLE SKELETON SHELVES TO DIPPER'S MANGLE.

FRANCIS W. HARRIS & Co., Burslem, whose business has previously from time to time been noticed in our pages, are, of course, well known inside and outside of the Potteries district as mill furnishers and engineers, and they enjoy the confidence of a wide and important clientèle. The business was established 14 years ago by Mr. Francis W. Harris, who had been specially trained as a mechanical engineer. His experience had been gained in the North Staffordshire district, and, to a large extent, in connection with potteries and brick and tile works. The object in view upon the launching of the company was to provide means for power users of every sort to obtain the hundred and one accessories incidental to their business. This naturally necessitated a thorough technical knowledge on the part of those who undertook to manage the business, and, by reason of his training, this Mr. Harris happily possessed. The progress made in the intervening period has proved that there was ample room for an establishment of this character, and Francis W. Harris & Co. can now confidently solicit the orders of the pottery and allied trades for every requisite necessary to the engineering and mechanical side of such businesses. They lay special emphasis on the excellence of their commodities, particularly in regard to rubber goods for pumps. Every practical potter knows the important part played by pump rings and pump valves in the various processes connected with clay in its liquid or slip state. Harris & Co. have made a special study of this branch of their business, and have experimented to a considerable extent, with the result that they are now supplying goods of the very highest quality, and which are appreciated by all who take a pride in possessing a creditable plant. There is no economy in paying a low price, and using thereby many times the amount of material which would be necessary if goods of the proper quality, although higher in initial cost, were procured, and fortunately this is becoming recognised more and more from day to day. Special attention should be drawn to the firm's sectional rubber pump rings, for which better results are claimed, in that the inner portion next the ram can be renewed without interfering with the outer portion, securing in the circumstances lesser cost. Amongst other items we specially noted when recently at Burslem were cotton driving ropes, and belting, in relation to which Harris & Co. are specialists, and also a series of metal lamps for factory use, which are certainly a great advance over oil lamps or candles. We predict a great future for these lamps once they are properly understood and appreciated. The illuminant is provided by carbide, which is manufactured into gas in the lamp, and it gives a light very much more powerful than the ordinary oil lamps, and also at less cost. A moment's consideration will be sufficient to convince intending purchasers of the various advantages they are likely to obtain by getting a thoroughly good clean light, and the lamp in question will be very useful in relation to much of the work in the local factories. The lamps will willingly be sent out on approval to interested parties, and Harris & Co. invite queries as to prices, &c. Before closing we ought to make a reference to another branch of their business in which they are pre-eminent, namely,

that relating to the installing of fans for the pottery and allied trades. A large number of the fans supplied some ten or twelve years ago, when radical changes were introduced by the Government, were supplied and engineered by Mr. Harris, and many of the most successful installations may be placed to his credit. This is worth noting at a time when legislation is again making it compulsory for a further advance in this direction. Harris & Co. supply an excellent type of fan, which has proved its high efficiency, and they generally have a number of these in stock to accommodate urgent needs. For ventilating, warming, and drying appliances they hold a reputation, and amongst other important lines of their business may be mentioned gas engines, bolts, nuts, rivets, tubes and fittings, oils, packing and waste, belting, rubber, asbestos, press cloths, taps and nozzles, and steam and water fittings.

Billington & Newton, Ltd., engineers, Longport, have recently introduced an improvement in taps and nozzles for filter presses which it is expected will in future play an important part in sliphouse arrangements. This new tap is offered to replace the ordinary or old patent slip taps without alteration to existing presses by using a long nozzle for the ordinary tap, or a short nozzle for the old patent tap. With the new patent type of nozzle a patent cloth is used consisting of an ordinary press cloth tube attached to the centre. This cloth tube forms a joint on the nozzle which has a brass tube projecting from the outlet end for the purpose of conveying the slip into the interior of the cloth. The trays in this case are not required to be cut, and filtration is thereby secured throughout, whereas the old types of slip tap nozzles have to be secured to the cloth by a nut and washer, and a portion of the wood of the trays cut away to allow room for this connection. The new nozzles are interchangeable, and may be used on any part of the press. The joint between the tap and the nozzle is made by the upward pressure of the slip on the bottom of the nozzle, and elips are provided to hold the nozzle in position until the back pressure is set up. It is claimed that the cloths will wear very little round the patch and will be washed without any brasswork attached. Easy connecting and disconnecting of the taps without using a lock nut or clamping device as hitherto employed is an important claim, as this ease of connection and disconneetion may be expected to result in a considerable saving of time, especially in view of the fact that a considerable number of taps and nozzles are used in connection with the bags of one filter press alone.

The Rapid Magnetting Machine Co., Ltd., 18, The Crescent, Birmingham, recently held an exhibition in Burslem of their "Rapid" patent electro-magnetic separator with rotary pumps, the main object of the demonstration being to show how a difficulty which has hitherto been dead against the apparatus has been overcome. As is generally known, in most sliphouses the sifters deliver into the magnet trough, which is placed on the floor, and the objection to the patent separator of the Rapid Magnetting Machine Co., Ltd., has been that the potter has been unable to allow the fall required by the new apparatus, for there is an undoubted advantage in tilting it, and the more it is tilted the better it will work. To overcome the difficulty referred to, a small rotary pump is secured to the ground floor, and lifts the material to be treated to a height, usually about 6 ft., but to as high an elevation as within certain limits may be desired. Another improvement has been made since the plant was previously demonstrated, inasmuch as the collapsible or safety bridge has now been made part and parcel of the apparatus. This appliance is a very important feature of the plant, as it automatically diverts the flow of liquid in the event of a failure of the electrical current, and therefore prevents any iron which would be washed off the magnets under such circumstances passing into the trough. Should the current fail the bridge automatically drops, depositing the rest of the material into an emergency trough, or conveying it back to the blunger or mixing ark. At the same time a strong alarm bell is caused to operate, warning the man in charge of the failure. This bridge serves a double purpose, as when the magnets require to be cleaned down, the current is switched off and the bridge falls, allowing the water flushing the trough to carry away with it into the emergency tank the iron which has been washed off the magnets. This collapsible bridge was in the earlier types of the plant a separate appliance, and had to be added and fixed by the user, but it now forms a part of the separator, fixed by means of a bracket. The machine demonstrated was equipped with electro-magnets of double the strength of the plant previously shown. A special feature of the plant is that cleaning down and restarting can be accomplished within five minutes from the time of stopping. The photograph we reproduce will show the improvements



here shortly referred to, and is the identical apparatus which our representative saw at work in Burslem during April. We were told by Mr. H. H. Thompson, of the Rapid Magnetting Machine Co., Ltd., that he had proved by actual tests made in the presence of the bringers, material which had been already treated by ordinary potter's magnets or other systems of electro-magnets, that the "Rapid" apparatus is so searching, that as compared with permanent magnets millions of minute particles of iron are separated which the ordinary permanent magnet fails to secure, and as compared with other types of electro-magnet the same result was found in slightly less degree. These particles are so minute that they are only just perceptible with the naked eye when laid on a white background. The company inform us that since the completion of the demonstration they have been favoured, among other orders, with one from Doulton & Co., Ltd., Burslem, for five more of their apparatus, bringing up the total number ordered by this firm (including two delivered about two years ago) to seven.

British Earthenware in the Morea.—The British Consul at Patras reports that during the last few years earthenware goods from the United Kingdom have been steadily gaining ground, and will soon take a prominent position, as they are found to be better glazed and stronger than foreign goods; but only the cheaper descriptions can be profitably imported, as the import duty on chinaware and elaborate patterns intermixed with gold is prohibitive.

SOME CHINA SHOPS IN BRISTOL.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

(*Continued from page* 436.)

MR. WM. COTTRELL, 21 and 22, Barrs-street, Bristol, has an old-established china, earthenware, and glass business, which he has conducted for the last 55 years. Mr. Cottrell is now in his seventy-eighth year, and it is interesting to learn that he was born in the same street. In the year 1917 his family will have been identified with Barrs-street for a round hundred years. Naturally Mr. Cottrell's advancing years forbid him giving his whole time and attention to the business, and it has, therefore, been delegated very much to the charge of his niece, Miss Headford, who has been associated with it for quite 30 years, and therefore knows her way about thoroughly. Mr. Cottrell has concerned himself particularly with a medium class trade, and for this he has laid himself out admirably. In spite of keen competition, and indeed some unfair competition—not, however, I am pleased to state from the legitimate china dealers, with whom Mr. Cottrell is on the very best of terms—his business has forged ahead, and continues to play an important part in the neighbourhood of Bristol. The shop is double-fronted and has a very good stand. Our photograph of the exterior will show that it is of good size, and that it is utilised to the best advantage. The outside display of household lines is calculated to arrest a passing trade, although Mr. Cottrell is not by any means dependent upon this, as he has a really good round of regular and valued customers. The outside racks, as will be seen, are taxed to the limit of their holding capacity with jugs, whilst the shelving and the recess below contains hardly an uncovered inch, almost everything needed for the kitchen being on view outside the shop, and not only kitchen utensils, but bedroom ware, foot warmers, and all sorts of household requisites that are to be had in pottery. The window is most discreetly set out, and before entering the shop I paused to take a few notes of suggestions which the arrangement conveyed to my mind. Inside the shop I was courteously received by Miss Headford, the manageress, and was soon satisfied that she takes a keen and intelligent interest in everything that relates to the business. During her long experience with her uncle, Mr. Cottrell, she has acquired an intimate knowledge of the needs of the people who regularly replenish their china cupboards at that establishment, and whether it is a complete outfit that is required, or merely a soap cover to match a toilet set purchased from the shop in the sixties,



[*Photo. by A. Holborn.*

MR. WM. COTTRELL.



EXTERIOR OF WM. COTTRELL'S SHOP AT BRISTOL.

she knows how to deal with it judiciously. These matchings are generally known in the Potteries by the derisive term "shipping" orders, but all dealers, unfortunately, have to negotiate them, and I happened to see such an order handed in during my conversation with Miss Headford, which gave me an opportunity of discussing with her the vexed question of matchings. I was pleased to see that she appreciated fully the troublesome nature of such orders to manufacturers, at the same time I learned that Mr. Cottrell's relations with the potters were most pleasant, and that most of the firms with whom he deals find it to their advantage to treat such orders sympathetically, and as a necessary auxiliary to more important business. I discovered whilst in Mr. Cottrell's shop that a number of the British manufacturers are now devoting far more attention to the question of trinket ware, and



INTERIOR OF SHOP: MR. W. COTTRELL.

threaten to put up a severe competition before long with the foreign-made article, which, however, still continues to be imported freely by practically all the provincial dealers. The stock included a very nice selection of toilets and fancies, and some neatly cut glass ware was also shown to good effect, a number of Stourbridge makes being conspicuous. The Bristol productions were prominently displayed, and I learned that Mr. Cottrell is one of the oldest customers on the books of the Bristol factory. There was a very good showing of Doulton vases and fancies, and a number of other high-class makes which I am unable to refer to more particularly. I am glad to be able to show also a photograph of the interior of the premises, which will convey better than words the variety of goods marketed and the extent of the stock which is held of saleable lines. The shop is some 48 ft. in length, and is so constructed as to secure a maximum of daylight. All the warehousing is done in the cellar, and the packing is done at the back of the shop on the ground floor. As I have already stated, the business deals principally with a medium class trade, and consequently the very high-class lines, although represented by a few choice sets, have given place to more readily saleable lines, which Mr. Cottrell has evidently found to suit the needs of his particular neighbourhood. In spite of this, however, I was in no way disappointed with my visit to Mr. Cottrell's establishment, which I am convinced transacts quite a huge volume of business in the course of a year. A few personal particulars with regard to the proprietor will doubtless be found interesting. Mr. Cottrell is a well-known and respected personality, and during his career has played a by no means unimportant part in the municipal affairs of his city, having been a member of the City Council for the past 22 years, and he still represents the St. James' Ward, in which his business is situated. His connection with the Bristol City Council has naturally brought him a good deal of honorary work, and amongst a host of other duties he continues to regularly attend meetings of the Sanitary, Education, and Old Age Pensions Committees, as well as serving upon the Burial Board. The writer, on his recent call, was unfortunate in finding that Mr. Cottrell was that very day engaged upon an important municipal committee, and this in spite of the fact that he has only recently recovered from a five or six weeks' illness. Happily, however, his recovery is quite complete, and we heartily wish him continued health, vigour, and prosperity.

(*To be continued.*)

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

RAILWAYS AND OWNER'S RISK.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Several months ago the S.E. & C. Railway Co. tendered us a tierce of glass from the North of England, which was consigned "Owner's Risk." It came by steamer to London, thence by rail. The top of the tierce was completely off, thus exposing the straw.

We offered to take the goods, providing the railway company agreed to indemnify us for pilferage and breakage if any, they to send a representative to see the tierce unpacked. This they refused to do, and still have the tierce in their possession. Can anybody who has had a similar experience inform us how we stand in the matter?—Yours, &c.,

WILLIAM GILES & SON.

Ashford, Kent, April 22, 1913.

RAILWAY CHARGES AND CONDITIONS OF DELIVERY.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Not content with charging me 3d. each time a package is advised and another 3d. if I fail to request delivery within 48 hours after advice has been received, other conditions have been sent to me by the agent for the railway company, copy of which I give below.

"Dear Sir,—We are keeping a special watch upon the carrying of our earthenware traffic, delivery, and also unpacking.

I shall therefore be glad if you will arrange to have your crates unpacked in the presence of one of our men, who will be present when delivery is made.

Any suggestion or information you can give us will be appreciated.—Yours truly, ———."

How very difficult such a request will be to comply with, will be at once apparent to any glass and china dealer. I should like to know if such an order has been sent out to the trade generally by railway companies, or if it is only a freak on the part of our local agent. Also if one can be compelled to comply with such an arrangement. —Yours. &c.,

April 22. A LANCASHIRE GLASS AND CHINA DEALER.

THE PREVENTION OF PLUMBISM.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—"Keep lead dusts out of the nose and mouth." This is the whole of the findings of the ponderous Royal Commission in the Pottery investigation regarding lead, and will be the finding of the Commission now sitting on Lead Poisoning, and will be the crux of all new laws in relation to lead trades, when considered in the light of new knowledge. The man is a fool that touches a live electric wire. The assimilation of this knowledge costs countless lives. We are spending many lives on an equally simple educational necessity, and shortly we will say a man is a fool who does not "keep lead dusts out of the nose and mouth."

There may be some danger of lead poisoning through absorption through the skin, or abrasions of the skin, or in a dozen other ways, but it is no more of an economic menace in England than snake bite; possible, but not probable, or particularly dangerous.

Read the findings in France, Belgium, Germany, England; the great authorities everywhere; consider the causes of plumbism in every one of the lead-making trades, painters, plumbers, storage battery makers, potteries, and even smelters, and we find all menace is solely due to the particles of lead dust (or fume, which is practically the same thing), passing into the human system through the nose or mouth.

The remedy is simple. Teach the painter that he must not buy his lead dry and mix it himself with linseed oil; teach him he must not sandpaper lead-painted surfaces dry. Teach him that both operations can be better, and more economically, done in the approved methods than in the old way, and 95 per cent. of lead poisoning disappears from among the painters.

Teach the potter and the storage battery man, as well as the carriage painter, to refuse to work in rooms from which all dusts are not removed by forced draughts. Teach the plumber he shall not eat, or place anything in his mouth, without careful washing, after handling lead pipe, or any alloy containing lead—teach the smelter he is courting death to breathe the fumes arising from molten lead or the dusts arising from kettle skimmings.

Teach every man that a stomach full of strong, healthful food is the greatest preventive of plumbism, and a few hygienic principles that are only common sense, and the menace disappears.

Teach them they must avoid and prevent constipation; that the gastro-intestinal tract must be clear: that Epsom salts is cheap and efficient, and will in a very great degree render harmless any lead that may be ingested.

The whole difficulty is lack of knowledge. The manufacturer does not know, and should be taught, that where there is lead dust his workmen's lives are in jeopardy; that it is his paramount duty to the industry, to the State, and to humanity to protect his employees from lead dusts or fumes; and how simple and inexpensive the remedy. The scientist has only learned in the past very few years—and he is teaching the lesson.

No man ever voluntarily exposes the labourer to death; the employer may not realise the danger—but teach him, and teach labour, for its protection, to keep lead dusts out of the nose and mouth, and there is no more need for lead legislation than for legislation to prevent a man's touching a live electric wire. And there is no more sense in the prohibition of lead than there would be in the prohibition of electricity.—Yours, &c.,

April 4. "AMERICA."

ANSWERS TO CORRESPONDENTS.

Glass, London.—The monthly import and export tables given in this GAZETTE are abstracted from the official Board of Trade Returns, which in turn are based upon the Customs House Bills of Entry, supplemented by special information as to the initial places of origin or ultimate destinations.

C., Suffolk.—For particulars as to visiting Ghent while the Exhibition is open you might apply to the "Bureau de Logement," which has been specially organised. Information as to travelling arrangements is given very fully by the Great Eastern Railway Co. Further details may be obtained from the Exhibitions Department of the Board of Trade.

Inquiries answered through the post for:—Kilns for firing bottles after they have been decorated.——Square moulded glass honey, Reg. No. 252,274, to fit plated stand and cover.——Dinner ware, Reg. No. 27,608, Oxford.——Tea ware, Reg. No. 30,587.——Glass pepper-pots with glass tops.——Fancy Welsh china and Welsh figures.——"Bath" pattern dinner ware.——Dinner ware, Reg. No. 107,788, England.—Glass lustres for vases.—Tea ware, Reg. No. 290,035.—Dinner ware, Reg. No. 300,714 "Leighton."

CORRESPONDENT'S INQUIRY.

[4975].—Attenburg China.

THE ROYAL VISIT TO THE POTTERIES.

(BY OUR OWN REPRESENTATIVE.)

THE visit of their Majesties King George and Queen Mary to the Staffordshire Potteries, which has been the general topic of the district for months past, has now been made, and in some respects is a thing of the past; not so, however, in the memory of the people, for numbers of them have come into closer contact with their King and Queen than they have ever done before or, maybe, are likely to do again, and to all the words "King" and "Queen" seem far more homely terms than was the case before the visit. The event has been signalised by complete success from every point of view, and the intelligent, indeed one might say inquisitive, interest taken by their Majesties in the conditions of the factory life of the district has been appreciated by manufacturer and operative alike. For the first time in its history the Potteries district has come in for the visit of a reigning Sovereign. Naturally, therefore, the keenest interest was manifested.

The preparations for the eventful visit had been completed with exceeding care, and it can safely be said that nothing had been left undone to insure the comfort and invoke the pleasure of their Majesties during their short visit. One recalls at this juncture that some years ago the Potteries district was dragged through the mire by sensational sections of the press of the country and grossly calumniated. The visit of the King and Queen will do much to remove the misapprehensions which that unfortunate crusade may have served to create in certain quarters. Anyone who knows anything of the district at all does not need to be told that its citizens have qualities that are peculiarly characteristic of them, amongst which may be mentioned staunch loyalty, warm-heartedness, and unbounding hospitality. Is it surprising, therefore, that the people should have risen to such an occasion as the one presented to them on April 22 and 23? Although the visit was of a private character, from far and near they congregated together and lined the Royal route, some of them waiting for hours in order just to catch a glimpse of their Majesties, even in their closed conveyance, and many of them were quite satisfied if only they could wave or shout their greetings as the cars wended their way through the principal streets to the various factories which it had been arranged they should visit.

The enthusiasm ran high indeed at the critical moment, and although it had been intended that the King and Queen should have the opportunity of witnessing the Potteries in the midst of its toil, in some respects this was quite impossible, for no sooner the final touches were given to the decorations and the bunting —some of which it seemed had been purposely left until a late hour—than the workers generally contracted a holiday mood, and seemed to make up their minds definitely to "down tools" and join in the festivity which the occasion seemed to warrant. At some of the factories it was thought even until the morning of the visit, that work would, for some portion of the day at any rate, proceed uninterruptedly, but the management at the last moment realised the hopelessness of carrying out that idea, and were compelled to yield to the wishes of the operatives. This, of course, did not apply to those particular branches which their Majesties wished to see under normal conditions of working, but no sooner had the Royal visitors passed through the respective shops than the workers were seen to leave their benches wholesale and join the ranks of the enthusiasts in the crowd.



THE ROYAL CORTEGE PASSING THE WINTON WORKS.

The welcome of the whole district reflected the intense gratification which it had afforded, and their Majesties, who have now returned, must certainly have been impressed and encouraged by what they saw, and reassured by the wealth of loyalty displayed as much as by the productive resources of the industry which the district represents.

The visit has been so fully noticed in every section of the press of the nation that it leaves a trade journal published a week afterwards but little to deal with. One must, however, place on record some of the items connected with the tour, which will be of general interest to manufacturer and dealer alike. The King and Queen did not, of course, confine their visit exclusively to the Potteries, and we leave to others the record of the inspection of wagon works, collieries, dairies, and silk factories, satisfying ourselves with recording a few facts connected with the Potteries.

The first pottery to be honoured by the Royal party was that of Mintons, Ltd., and promptly to schedule time the Royal cars

arrived in London-road, Stoke, and were met at the entrance to the china factory of Mintons, Ltd., by Mr. J. F. Campbell and Mr. H. M. Robinson, the latter accepting the duty of escorting the King, and the former the Queen, through the prescribed shops. Mr. J. W. Wadsworth and Mr. H. Minton Senhouse pioneered the remaining section of the party. The first shops to be inspected were two large rooms in which girls were to be seen colouring or enamelling the high grade china for which the firm is world-famed. The inspection was confined exclusively to the china factory, but the workers from the earthenware department had assembled along with all the other disengaged workers, numbering altogether some 1,100, and raised a mighty cheer as the Royal suite entered the archway. Passing through the two shops already mentioned, the party proceeded through the gilt warehouse, where they had the opportunity of viewing a magnificent display of all sorts of high class china. Fortunately the firm were exceedingly busy at the time, and consequently there was quite an accumulation of all styles of designs reaching their finishing stage, and being assembled for early packing. The fact of Mintons, Ltd., being extremely busy was also clearly discernible in the burnishing shop, where there was a volume of work about, and this included pieces actually on order for Windsor Castle and Buckingham Palace, as well as Royal monogram ware, "G.R." and crown. Some of these pieces their Majesties saw in the process of burnishing, and afterwards passed through the gilding shops to witness all kinds of paste gilding, raising and chasing, the sort of ware for which Mintons have a distinct reputation, and in which they have some exceedingly clever artists. One of their principal workers in the decorating department, Mr. A. Birks, was seen engaged on pâte-sur-pâte, attracted, picking it up and inquiring just how the effect was produced. Another beautiful piece on show in the room took the form of a vase (as illustrated) representing round the body in a brilliant red, characteristic of the Moore productions, on a grey background, St. George and the Dragon, with the Royal Arms at the top and the inscription, "Deus judicium tuum regi da" ("O God, give to the King your judgment"). Underneath was inscribed: "Bernard Moore. To commemorate the visit of their Majesties King George V. and Queen Mary to the Potteries, April, 1913." The Queen mentioned in passing through the room that she already possessed a number of pieces of Mr. Moore's rouge flambé. She was particularly interested to know if Mr. Moore was exhibiting at Ghent, and on learning that he was replied, "I trust the Belgian strike will not interfere with the Exhibition." This conversation was probably inspired by the fact that there was on show in the room the only unbroken vase rescued from the Brussels Exhibition fire of 2,000 of Mr. Moore's pieces which were exhibited. The vase is, of course, spoiled altogether so far as decoration is concerned, but it is interesting, inasmuch as it shows how the molten glass from the showcase in which it was placed has run down the sides and, in cooling, has formed globules. Much more time could have been spent in Mr. Moore's room to advantage, but, as previously remarked, the programme necessarily restricted the allocation of time to the respective factories visited, and the Royal party consequently passed on, after spending twelve minutes in Mr. Moore's room, to the King's Hall, where they were received by the Mayor and Corporation, and the National Anthem was sung by local choirs. Their Majesties here inspected a marvellous collection of specimens of ancient and modern pottery collected from the works of the district generally, including those factories which did not come within the scope of the visit.



Mr. Bernard Moore's "George and Dragon" Vase.

Passing on afterwards to W. T. Copeland & Sons' works in High-street, their Majesties were met at the gates by Messrs. Gresham and Ronald Copeland, the principals, and escorted to the showroom, where they graciously received Mrs. Copeland and Lady Swettenham. The showroom was magnificently arranged—though it always is—and Royal purple draped the principal tables. The vestibule to the showroom was furnished in the Jacobean style in keeping with a beautiful display of the antique dark blue "Spode Italian" ware, the reproduction of which some years ago met the prevailing taste so thoroughly as to warrant a whole suite of warehouses being allotted to it. The display of this pattern in all the articles in which it is produced could not have been more effectively made. Each individual piece was shown up upon a white cloth with blue embroidery, and a choicer effect in the direction of the antique could hardly be conceived. The Queen immediately picked up and closely inspected a pierced bread tray, known as the "Coventry," and passed a most complimentary remark respecting it. Just outside the showroom proper the famous Mecklenberg pattern was exhibited on one of the foremost tables. It may be news to some of our readers that a service of this design, which, by the way, is specially reserved to Royalty, was purchased by the late King Edward through Thos. Goode & Co., London, for presentation to H.M. King of Spain on the occasion of his marriage. It is a most exquisite design, the principal subject being an exotic bird of the Spode type, beautifully hand-painted, and having a border made up of chased gold butterflies in mazarine blue and gold panels, with festoons of hand-painted flowers intervening. Reproductions of the Spode designs were shown in abundance, and came in for expressions of admiration on the part of both King and Queen. There was ono special table of such reproductions, the designs being attributed to Spode about the years 1770-1800, and reproduced from Spode's original pattern book now in the possession of Messrs. Copeland. Shelves adorn the walls of the showroom holding specimens of crested plates supplied to numerous members of Royalty. A dinner plate of the famous Indian service supplied to her late Majesty Queen Victoria with the well-known inscription, "Heaven's light our guide," beautifully worked by hand in the centre, was recognised as a plate of the original service. On another table was a special selection of pieces in royal blue and gold as supplied to H.M. the King for the royal yacht. It is a beautifully neat design with badge in blue and gold in the centre. A reproduction of a Spode pierced dessert service in an all-over green with a small hand-painting

which, as is generally known, was brought to perfection in this factory by Mr. Solon. The crest painters were next watched by their Majesties with more than ordinary interest, and the King commented very favourably on a painting of the Royal Arms by Mr. R. J. M. Nabney for Queen Victoria's Diamond Jubilee in 1897, also recognising a copy of a set supplied to the late King's yacht "Osborne." In many respects it was unfortunate that only 27 minutes could be allowed to this factory, but the programme was, of course, a very full one, seven factories having to be visited in the first day, in addition to other functions which a Royal visit such as this necessitated. The inspection of Messrs. Mintons' was, therefore, brought to a conclusion by an examination of the work performed in the engraving shop, which proved very interesting to their Majesties and the other members of the train.

Proceeding to the show-room of Mr. Bernard Moore, in Wolfe-street, their Majesties were met by Mr. Bernard Moore, a ceramist and chemist of such calibre that he does not need to be introduced to the readers of our journal. Here the Royal party were shown round the room, with the assistance of Mr. B. Moore, jun., and Mr. Reginald T. Moore, and they were able to see undoubted triumphs of art in glazes of Mr. Moore's creation, consisting of sang-de-bœuf, peach blow, haricot, rouge flambé, transmutation glazes, lustre, Hispano-Moresque, and gold flambé. The King was particularly impressed with the rouge flambé and sang-de-bœuf, lingering for the greater part of the time in the neighbourhood of the centre case in which this was shown, and engaging in an interesting conversation with regard to this particular ware. The Queen, on the other hand, was more inclined to be impressed with the gold lustre, the crystalline effects, and a small piece of beautiful Persian blue. To the last-mentioned piece she was particularly

in the centre, was also on view, this being a replica of a service bought by the Queen from Goode & Co. at the exhibition of Spode ware which they held last year. A beautiful dinner service of the "Stafford" design, as purchased by Her Grace the Duchess of Sutherland for use at Stafford House, adorned one of the tables, this having a fine richly embossed edge, treated in mazarine blue and gold. Another pattern which was much admired by the members of the Royal party was known as "Flower Embossed." It has a lilac blue rim, with a telling white flower embossment, as its name implies, and a large handsome hand-painted rose in the centre. Pieces of this old design are, by the way, to be seen in many of the principal museums, representing what was made by Spode about the year 1790. An earthenware dessert service handsomely pierced, and having a design of green oak-leaves and a light brown acorn, the edges of the perforations being traced in brown, this also being similar to a service purchased last year by Her Majesty, was also on show, and was recognised. There was an excellent display of Spode Japans, all entirely hand-worked, this being a usual feature of Messrs. Copelands' showroom. A handsome dinner service in blue and gold with white enamel pearls threaded through a gold buckle was a charming modern production. It would be a long story to relate all the interim stages between the Spode chintzes of 1770 and thereabouts to the modern services in acid work with rich present-day paintings in baskets of flowers and the like, and much must be left to the imagination of the reader. We will only mention further the old grey stoneware for which Spode was famous, and which is being reproduced to-day from the identical recipes. Before leaving the room their Majesties graciously signed their autographs, which will be placed on record amongst many other Royal signatures in the room, and were afterwards shown through the china greenhouse, witnessing there the drying of the ware before firing, and in an adjoining room the bedding of the ware in flint inside the saggars preparatory to the biscuit firing. The King was particularly interested in the contraction during firing,



[*Photo. by "The Pottery Gazette."*
GATEWAY OF W. T. COPELAND & SONS.

and asked numerous questions in relation thereto. One oven was in process of firing at the time, and another being set in, and much interest centred in both, remarks being made by both the King and Queen as to the enormous heat. Passing on to the dipping house they entered in conversation with Mr. Beech, who has been engaged as a dipper for the last 32 years. They were interested to observe that he is apparently not suffering as yet from the evil effects of lead, nor does he show any likelihood of so doing. The placing of the glost ware was afterwards inspected, especially the cranking of plates and the rearing of dishes. The change wrought by the fire upon cobalts, i.e., from black (unfired) to blue (fired), evinced the surprise of their Majesties, and much more which space forbids us to relate. It was really marvellous how much it was possible for the King and Queen to see in the 27 minutes allotted here, after which they proceeded to the residence of the Mayor, Alderman F. Geen, for luncheon, the schedule time having been adhered to rigidly.

Minton, Hollins & Co. were the first firm to be visited after luncheon, and Miss Hollins, Mr. Hollins, and Mr. J. W. Johnson



[*Photo. by "The Pottery Gazette."*
GATEWAY OF MINTON, HOLLINS & CO.

were presented to their Majesties. Subsequently the whole of the processes incidental to the manufacture of encaustic tiles were demonstrated in one room, after which the heads of the firm conducted their Majesties through the works. The King was specially interested in the manufacture of hand-made encaustics and tablets The finished works were exhibited in a separate room, and a hand painted tile, a copy of a Gainsborough painting of the Duchess of Devonshire, was much admired. The Queen was particularly interested in the embellishment of some of the tiles, and Her Majesty was not satisfied until she had taken up the pencil herself to try her hand at ornamentation.

Messrs. Ridgways' Bedford Works, Shelton, was the next factory on the list, and again arriving promptly on time the Royal visitors were met by Mr. John Ridgway, Mr. Edward Ackroyd Ridgway and Mr. Bertram Ridgway, the heads of the firm. The King engaged in conversation with several operatives in the lithographic transfer department, afterwards passing through the printing shop, and inquiring the why and wherefore of numerous procedures. Proceeding to the private room of Mr. Arthur Wood their Majesties inspected a choice display of plaques, many of which the Queen particularly admired, amongst which should specially be mentioned portrait plaques of the late King Edward VII., Queen Alexandra, King George, herself, and the Prince of Wales, which it is understood are being forwarded to her in accordance with a desire expressed that she should become the possessor of them. The Royal party stayed 23 minutes at Messrs. Ridgways, and saw much to interest them during that time.

After passing through the central parts of Hanley and the Hanley Park, where the school children were massed and greeted their Majesties with the National Anthem, the Royal party proceeded to the Devon Pottery of S. Fielding & Co., Ltd., and were there received by Mr. Abraham Fielding, who, with the assistance of Mr. Ross Fielding and Mr. J. Sayer, escorted the distinguished visitors over the works. The printing shop proved very interesting, and Her Majesty did not hesitate to get all the information she could from the girl transferers in relation to special details of their art. In the aerographing shop the Queen was very much interested

also, especially in the ventilation arrangements, and plied Mr. Sayer with numerous questions. Some twelve or fourteen girls were at work here on different patterns. The King in the meantime went down to the kilns and was just as interested in the conditions of the work of the firemen, asking a number of questions, and inspecting trials which were drawn to show him the condition of the ware in process of firing. A very interesting collection of articles was set out on a special table for the benefit of the Royal party, this containing samples of everything used in the manufacture of the Devon ware, right from the raw clay up to the finished article. Their Majesties were particularly interested in the "Devon Silverine" ware, and the King was quite amused at the "wooden" effect produced by the black colouration of the handles, and was anxious to see just how it was done. He remarked that they had noticed the "Silverine" ware at the King's Hall. The same ware, but gold lined inside, also came in for special notice. Everything possible had been done by Messrs. Fielding in order that their Majesties should see as much as possible of the evolution wrought in the materials



[*Photo. by Gover, Hanley.*

ENTRANCE TO THE DEVON POTTERY.

during the different stages of manufacture, and this was thoroughly appreciated. Ten minutes is not long to stay in such a factory as that of Fielding & Co., but in that ten minutes a very great deal was crowded.

Mr. H. J. Colclough's factory at Longton was the last pottery to be visited on the first day, and one would have imagined their Majesties were by this time getting tired, but none the less they stayed at this factory some eight minutes more than the allotted time. They were met by the proprietors, Mr H. J. Colclough and Mr. Bert. Colclough being presented to them. Their Majesties were then taken to the sliphouse, and shown the method of clay-making, being particularly taken up with the filter pressing and pugging, asking questions with regard to the solidification of the clay and the extraction of the bubbles. The saggar making was also demonstrated to them. They stood by whilst a saggar was made, and questioned with regard to the marl, the quantity of saggars used, and so on. Proceeding to the potting shops, much amusement was created by the answers of a little girl handle-maker to certain questions put. The casting of the cups came in for special attention, and the Queen was anxious to have explained to her why the slip was first poured into the mould and then poured out. As may be imagined, the operations of the thrower were specially engrossing. Throwing is doubtless the oldest phase of the potter's art, and still remains to the stranger possibly the most interesting. The Queen was also anxious to know if this was the factory "where the penny cups came from." Mr. Colclough explained that they did not market any quite so low as that, except inferior potted pieces, although he did think they sold some of their ware too cheaply. Passing on through the flat pressing shops, and the shops for the casting and pressing of the larger hollow-ware pieces, their Majesties finished up by inspecting a display of raw, partly manufactured, and finished articles. They were evidently quite as much interested in the manufacture of the cheaper lines of goods as the better. The inspection of Mr. Colclough's factory enabled them to see the manufacture of goods on the lines upon which the majority of the Longton factories work, and this was doubtless the reason of Mr. Colclough's factory being chosen, in preference to one of the tip-top Longton houses, which, really and truly, would not represent "Longton quality." Some dissatisfaction was at one time felt and expressed that one or other of these higher grade Longton houses was not selected. To Longton as a town possibly this would have been more acceptable; at the same time, that course would hardly have enabled their Majesties to see the manufacture of the class of goods for which Longton is particularly laid out. The fact that the King and Queen stayed longer than their prescribed time in Mr. Colclough's factory shows that they were engrossed in what they saw, and it is pleasing to see that they were anxious to learn something of all sides of the potting trade.

Thus concluded the first day's tour so far as the Potteries was concerned, and the Royal party afterwards proceeded by way of Trentham to Crewe Hall.

On the following morning, Wednesday, April 23, potteries at Etruria, Burslem and Tunstall were visited, and although these were dealt with in an hour and a half, including the time occupied in covering the distance between the respective factories, much was crowded into the time allotted.

At the works of Josiah Wedgwood & Sons, Ltd., Etruria, their Majesties were received by Mr. Lawrence Wedgwood and Mr. Frank Wedgwood, and were taken round the jasper rooms, also inspecting a room in which the great Josiah himself worked as a thrower, whilst his partner Bentley turned the wheel for him. The attention of their Majesties was directed to the fact that this was the workshop in which the first black basalt vase with Japanese treatment was made by Josiah in 1769, to commemorate the opening of the Etruria works. They were keenly interested, and attentively watched the thrower at his work. In an adjoining room the King and Queen found pleasure in witnessing the ornamentation of an oblong black jasper plaque, the workman being engaged in applying the Flaxman "Dancing Hours" figures. The deft application of the cameos to the black ground was a sight well worth seeing. The old gentleman engaged on this particular work, Mr. Thos. Lovatt, in reply to questions put, told their Majesties that he is 74 years of age, and has seen 63 years' service with the firm. He reminded them that he was present at the 1851 Exhibition at the Crystal Palace, whither he went at the expense of the firm. The conversation which took place was very homely, and the old gentleman was not in the least embarrassed; in fact, he even consented to sing for the Queen's benefit, an incident which was much enjoyed. Their Majesties then passed into an old black jasper oven which was in the process of being set in, and from thence to the museum, of which Mr. Isaac Cook is the curator. The inspection of the contents of the museum was necessarily curtailed, but it was sufficiently long to show that Her Majesty's knowledge of ceramics is far from superficial, and she displayed the keenest interest in all she saw. The King quickly recognised a portrait on the wall as a representation of the Barberini vase in the British Museum. In consequence of a desire which had been expressed by Her Majesty that she should be allowed to see an old mould actually used at the time of Josiah Wedgwood, the curator produced for her inspection an old broken pug dog mould, on the inside of which had been scratched "William Hackwood, 1774." The King was also interested in a copy of the Portland vase, the original of which was purchased by the Duke of Portland in 1786 for something over a thousand pounds, and placed at the service of Josiah Wedgwood to copy in jasper. Mr. Cook, the curator, has been with the firm for 57 years, and is one of a large group of veteran workers, of whom Wedgwood & Sons feel justly proud. Two groups of old workpeople were brought to the notice of their Majesties, the first group of eleven having worked with the firm for an average of 55 years, and the second group of twelve for an average period of 48 years. Both the King and Queen were intensely pleased with everything they saw at the ancient works by the side of the canal at Etruria, and not unnaturally, for all who have any knowledge of ceramics must, of course, at once put the name of "Wedgwood" in a pre-eminent place.

At the works of Doulton & Co., Ltd., Burslem, their Majesties received a novel greeting. On one side of the yard leading to the main entrance a number of employees were lined up holding in their hands a biscuit plate bearing large letters which spelled out the words, "Your Majesties' loyal potters." The King and Queen were received by Messrs. Lewis Doulton, chairman of directors, J. C. Bailey, managing director, Alan Doulton, and Chas. Noke. In the showroom their Majesties witnessed an imposing display. The Rembrandt ware was singled out by the Queen for special

commendation, and during the few minutes in the room Her Majesty also indicated her taste in regard to dinner ware, a neat and simple design taking her fancy in preference to the more ornate type of decoration such as Doulton & Co., Ltd., are in the habit of sending to America. She asked that a replica of a small figure of a boy known as "Darling," and executed in Copenhagen ware, which she noticed in one of the cases, should be sent on to her, as well as another of a mother and child entitled "The Lavender Lady." After signing the visitors' book, which already contained many distinguished autographs, their Majesties passed on to the studio, and chatted for some time with the artists, inspecting the sketch book of Mr. E. Raby, who specialises in flowers and birds. The orchid painting of Mr. Dewsbury, the landscape paintings of Mr. Plant, and the works of other skilled artists of the firm were inspected apparently with much pleasure. A vase with a Highland cattle scene by Mr. Jos. Hancock claimed the attention of the King, and the rose paintings of Mr. P. Curnock, the engravings of Mr. Vyse, the modelling of Mr. Jas. Plant, the romantic subjects of Mr. G. White, and the Bluebird plates of Mr. Harry Tittensor all came in for notice. Altogether there was a magnificent collection of the most artistic and elaborate productions; their Majesties evidently recognised this, and there was certainly nothing perfunctory in their inspection, in spite of the fact that it had to be discharged within a prescribed time. On leaving the works it was noticed by their Majesties that the plates in the hands of the young people in the yard had been changed, and now spelt out the universal sentiment, "God Save the King."

Proceeding now to the Royal Albert Works of Alfred Meakin, Ltd., their Majesties were received and conducted round the premises by Mr. Stuart Johnson and Mr. Frank C. Johnson, directors of the firm, Mr. L. Johnson also accompanying the party. Here the King and Queen were able to see the processes involved in the making of the moulds, the preparation of the clay and its method of working in the production of various useful articles. The process of kneading the clay to its proper consistency, whirling, batting, jolleying, drying, fettling and sponging all came in for attention, and afterwards the biscuit warehouse and decorating shop were passed through. Their Majesties were apparently pleased here, as at Longton, to be able to see the methods employed in the manufacture of pottery of a utilitarian kind. They were specially attracted by the making of oval meat dishes by machinery, the making and handling of the various articles, the pressing and casting, and the preparation of the clay. This was the last factory which the Royal party visited, and they subsequently passed out of the Potteries into greener surroundings to see other sights, though none of them possibly more entertaining than those they had had the opportunity of witnessing in the Potteries towns.



[*Photo by "Topical."*

THE KING AND QUEEN AT STOKE TOWN HALL.

Before closing this too brief article a word or two must be said with regard to the splendid exhibition of pottery which was made at the King's Hall, Stoke, in order that their Majesties should be enabled to see the productions of the other local potteries which they were unable to visit. This exhibition was typical of the ceramic productions of the district, although possibly some of the exhibits did contain certain lines which it would be absolutely impossible for the exhibiting firms to reproduce to-day. Be that as it may, they were all articles which had been made in the district, and we should consider that this exhibition was the most comprehensive simultaneous showing of the productions of the Potteries that has ever been made. It was of such a character that it was quite as interesting to the inhabitants of the Potteries as to any outsider, and was a real revelation to the majority who took advantage of the opportunity of viewing the display. To do justice to it the record of its contents would fill our present issue, and we therefore find it impossible to refer to the individual exhibits.

During their visit to the Potteries their Majesties were the recipients of numerous gifts, which will doubtless serve to remind them in years to come of their hurried, though probably none the less pleasurable, visit to North Staffordshire in April, 1913.

THE BENEVOLENT INSTITUTION has very appropriately been singled out for special recognition in connection with the Royal visit. At an early stage in the proceedings it became known that His Majesty had graciously extended his Royal patronage to this deserving Institution. The formal announcement took the form of a letter to the President as follows:

DEAR LORD HARROWBY,—

Lord Stamfordham has handed me your letter of the 8th inst., and I have now received the King's command to say that His Majesty is graciously pleased to become patron of the Pottery and Glass Trades Benevolent Institution.—Yours faithfully,

W. CARRINGTON.

This good news was received with the greatest satisfaction, as their Majesties were enabled to see, for at the entrance to the works of Doulton & Co., Ltd., Nile-street, Burslem, a large banner was displayed:—"The Pottery employees thank the King for the honour he has conferred in becoming the Patron of the Pottery and Glass Trades Benevolent Institution." This sentiment will doubtless find a hearty echo among the many friends of the Institution in the trades concerned.

It might also be interesting to note that a copy of the special April Spring issue of THE POTTERY GAZETTE was graciously accepted by His Majesty, and was suitably acknowledged in a letter which we have received from Lord Stamfordham.

HIS MAJESTY'S THANKS.

The King has addressed a letter to the Marquis of Crewe, with whom he stayed during his visit to Crewe and the Potteries, in which he says:—

"My dear Lord Crewe,—At the conclusion of our very pleasant stay at Crewe I would ask you to make known what intense gratification the Queen and I have experienced by the friendly and enthusiastic welcome given to us by the people of those parts of Cheshire and Staffordshire which we have visited during the last three days. Throughout our journeys, covering upwards of 120 miles, we have received outward proofs of affection and goodwill, while every town and village was tastefully decorated. There was hardly a house which had not marked the occasion by some individual display. We were delighted that ample arrangements had been made for the children to take part in the festivities. Every heart must have been touched by the effect of the voices of those thousands of little ones who greeted us in Hanley Park on Tuesday. . . .

"We were deeply interested in our charming experiences of the various works in the Potteries district, and of seeing the daily workers of those unique and historic industries, famous not only in our own country, but throughout the world. . . . Please express to the mayors and chairmen of the county, urban, and district councils my approval of their excellent arrangements for our reception and the effective manner in which the police duties were performed. At the same time it was satisfactory to notice that, thanks to the perfect order so cheerfully maintained by the vast crowds themselves, these duties must have been, comparatively speaking, light. . . . We have carried away the brightest impressions of these eventful days. The hope that these feelings may be shared by the thousands of my people who welcomed us will complete our joy and satisfaction in coming amongst them.—Believe me, very sincerely yours, "GEORGE, R.I."

There is no doubt that His Majesty's hope will be fulfilled, and that the memory of his visit will long remain and be full of pleasant associations in the hearts of his loyal subjects in the Six Towns.

So closes a memorable event which will occupy a golden page in the long and honourable history of the Staffordshire Potteries.

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c.; also marked local newspapers.

Mr. J. Back, glass and china dealer, has been re-elected on the Parish Council at Wye (Kent).

Mr. J. Berrey, glass and china dealer, Queen-street, Gravesend, has been elected on the local Board of Guardians.

Alderman E. Lake, glass and china dealer, East-street, Chichester (Sussex), has been re-elected Chairman of the Board of Guardians.

Mr. W. Cheshire, glass and china dealer, St. Botolph's-street, has been elected a member of the Committee of the Colchester Chamber of Commerce.

The Stock of the late Mr. Thos. Fox, glass, china, and earthenware dealer, Colonnade, Bradford (Yorks.), was disposed of by auction on April 16 by order of the executors.

Thos. Forester & Sons, Ltd., Longton, have recently appointed Mr. Walter Lane as their London representative and manager in succession to the late Mr. E. Morgan Jones.

Mr. W. Broughton, glass, china, and earthenware dealer, Strand-street, Douglas (Isle of Man), announces that he is giving up business. The stock is being disposed of by a realisation sale.

The business of the late Mr. R. Ireland, china and glass dealer, 5 and 6, Apple Market, Kingston-on-Thames, whose death was announced in the last issue of THE POTTERY GAZETTE, will be continued by Mr. R. P. Ireland.

Mr. W. Dutton, glass and china merchant, 730, Stockport-road, near Slade-lane, Manchester, announces that he is giving up the business. In consequence the stock was disposed of by auction on April 14 and following days.

Mr. Wm. Davis, who died on April 18 at the age of 71 years, had for a long period been engaged as a glass blower at the Oldbury works of W. E. Chance & Co. For seven years he had served on the West Bromwich Board of Guardians.

Mr. A. Carr, china and glass dealer of Dundee, who has been in indifferent health for some time past, sailed on April 5 for a three months' tour in Canada and the States. His many trade friends will join us in expressing the hope that the sea voyage and change will prove of benefit to him.

The death occurred on April 16 of Mr. John Edmundson, who was for about 60 years engaged at the glass works of Pilkington Bros., Ltd., St. Helens. He was 79 years of age. At the funeral on April 19 the mourners included Colonel W. W. Pilkington and other representatives of the firm, who sent a handsome floral tribute.

William H. Goss, Falcon Works, Stoke-on-Trent.—It should be pointed out for the benefit of those interested in this firm's original heraldic wares that the regrettable and untimely death of the senior partner, Capt. Victor Hy. Goss (referred to elsewhere in this issue), will not affect the business being carried on as heretofore.

British Clay Exports during the three months ended March were as follows:—China clay, 136,210 tons (£158,919); fireclay, 14,781 tons (£11,055); other sorts, 16,876 tons (£13,881). Exports for the first three months of 1912 were:—China clay, 148,611 tons (£168,910); fireclay, 7,762 tons (£6,387); other sorts, 14,549 tons (£11,184).

Fires.—On April 7 a fire occurred at the premises of Martin & Bramley, wholesale hotel glass and china merchants, Marsh-street, Bristol. The fire originated in the top portion of the premises, and was speedily subdued by the firemen.——A fire which occurred on April 4 at Burton-on-Trent resulted in the total destruction of the premises of Mr. Geo. Abraham, Station-street, who had an extensive glass and china department in connection with his furnishing business. The damage, estimated at several thousand pounds, is covered by insurance.

Lead Poisoning.—From the statistics published in the "Labour Gazette" for April, it appears that the total number of cases of lead poisoning reported to the Home Office during March, 1913, was 43, of which 1 was fatal. In addition, 25 cases of lead poisoning (4 of which were fatal) were reported among house painters and plumbers. During the three months ended March, 1913, the total number of cases of lead poisoning reported was 150 as compared with 154 in the corresponding period of 1912. The number of deaths was 7 in 1913, as compared with 9 in 1912. In addition there were 57 cases of lead poisoning (including 9 deaths) among house painters and plumbers during the first three months of 1913, as compared with 52 cases (including 6 deaths) in the corresponding period of 1912. Of the 43 reported cases of lead poisoning in March last under the Factory and Workshops Act, there were 12 cases and 1 death in connection with the china and earthenware trades, 6 of the persons affected being females. During the three months ended March, 1913, there were 22 reported cases and 4 deaths in our industries, as compared with 24 cases and 5 deaths during the corresponding period of 1912.

Pottery and Glass at Bristol.—The Commercial Year Book of the Bristol Chamber of Commerce says:—"Old Bristol china has become renowned, and nowadays collectors pay long prices for notable specimens. The art of the potter is still represented on a large scale, and Bristol products, besides supplying the home market, find their way to distant parts of the world. Stoneware takes a variety of forms. The familiar phrase "stone-ginger" suggests one, the demand for stoneware bottles for this beverage having stimulated that branch of the trade. Other and larger vessels for holding liquids are made in many shapes, and jars for domestic use also. Electricity has led to the development of a later branch, in which are included porous pots and stoneware cells for chemical batteries, and insulators. On the outskirts, in a modernised factory, tea and dinner ware, toilet sets, basins, jugs, and in fact domestic crockery of all kinds, are produced in great quantities. Glass-houses were conspicuous in ancient Bristol, and although the industry has relatively not its former importance, the manufacture of bottles is still a substantial business. Several large firms are concerned with the handling of glass and the production of bevelled plates and mirrors."

Presentations.—At the "A" Ford Pottery of C. T. Maling & Sons, earthenware manufacturers, Newcastle-on-Tyne, on April 16, a silver rose bowl, subscribed for by the staff and employees, was presented to Mr. and Mrs. John Ford Maling to commemorate their silver wedding. Mr. James Geggie (manager) presided. Mr. John Moore, engineer at the pottery, in making the presentation, referred to the splendid feeling existing between the firm and the employees, and mentioned that twelve of the employees present had a combined service under the firm of 486 years, or an average of 40½ years each. Mr. John Ford Maling suitably responded, and thanked the workpeople for their kindness in remembering the occasion in such a generous manner. Mrs. Ford Maling, the Misses Ella and Rita Maling, Mr. Christopher Maling, Mr. Fred Maling, and Mr. Stanley, the firm's London and export agent, were also present. Mr. J. Ford Maling is one of three brothers, all members of the firm; he has charge of the "A" Ford Pottery, where jam jars are the sole product, some hundreds of hands being employed.——Mr. Geo. Ford, of the staff of Carter & Co.,

encaustic tile manufacturers, Poole, has been presented by the office staff and employees with a silver tea service and several pictures on the occasion of his marriage with Miss M. Belben.

The Physical Properties of Clay.—A paper on this subject was read by Walter C. Hancock, B.A., F.I.C., before the Royal Society of Arts, on April 16. Mr. Hancock said that the subject of the physical properties of clay has not received as much attention in this country as it has on the Continent and in the United States, where the results of chemical and physical tests of a number of clays have been published, though recently, under the direction of the Geological Survey of England and Wales, several English clays have been subjected to similar tests. Although the physical properties of clays are influenced by chemical composition, those properties cannot be predicted from that alone, for two clays may show almost identical composition, but differ widely in working qualities. Both the "ultimate" and "rational" methods of analysis supply at best only conjectures as to the working properties, and consequently in ascertaining the value and most suitable line of application of a new deposit, the chemical investigation of the clay should always be supplemented by physical tests carried out under conditions that can be modified and controlled to suit the peculiarities of the individual sample, conditions which cannot always be secured in so-called "tests on a works scale"; in fact, a clay may be condemned by such tests simply because it has been submitted to unsuitable treatment. In a single lecture only a brief survey could be given of the most important properties for pottery purposes, which included texture or size of grain, plasticity, air- and fire-shrinkage, tensile strength, porosity and fusibility; such properties as expansion on heating, conductivity for heat and electricity, refer rather to particular uses of clays than to the material itself. The discussion of each property included also a short account of some methods of measuring it. The amounts of the various sized grains in a sample are usually determined by elutriation, and the fineness of one sample can be easily compared with that of another by means of the "surface factor," introduced by Jackson, and modified by Purdy and Mellor. Although many views have been given of the cause of plasticity, none, perhaps, are entirely satisfactory, and the actual feel of a clay when worked up with water still affords one of the best criteria as to its plasticity. In stating the air-shrinkage the amount of water used for tempering should be given, and in the case of fire-shrinkage the temperature to which the specimen was fired. The tensile strength is important to the potter on account of the resistance to handling which pieces of ware offer in the unfired state; it is influenced by rate of drying, size of grain, &c., and may be increased by suitable mixtures of clays. The changes on firing, porosity and fusibility were dealt with, and their importance is well-known to the practical potter. A short discussion followed, in which the chairman (Mr. Wm. Burton, M.A., F.C.S.), Dr. W. R. Ormandy, Mr. L. G. Pike and Mr. Noel Heaton took part. Mr. Hancock briefly replied, and was accorded a hearty vote of thanks.

The Shops Act.—The Manchester City Council have made an order exempting the glass and china dealers of the city from half-day closing under the Shops Act.——At Brighouse (Yorks.) glass and china dealers have applied to the Town Council for an order for closing at 8 p.m. on Monday, Wednesday and Thursday; 1 p.m. on Tuesday; 9 p.m. on Friday, and 10 p.m. on Saturday.——Burnley Town Council on April 4 issued a draft order for glass, china, and earthenware dealers to close at 9 p.m. on Monday, 1 p.m. or 8 p.m. on Tuesday; 8 p.m. on Wednesday and Thursday; 10 p.m. on Friday, and 10 p.m. or 1 p.m. on Saturday. The order is not to operate during the seven weekdays before Good Friday, before the Saturday commencing the Burnley Fair Holiday week, and before Christmas Day.——On April 3 the Ashford (Kent) Urban Council issued an order for glass and china dealers to close each Wednesday at 1 p.m.——Bristol C.C. have decided to make an Order under Section 4 of the Shops Act (1912) fixing Wednesday, or alternately Saturday, at 2 o'clock, as the day and hour for the weekly half-holiday in respect of the trades of earthenware, china, and glass retailers.——On April 17 a public inquiry was held at St. Albans respecting the making of an Order under the Shops Act. The hours asked for the glass and china trade were 1 p.m. on Thursdays, 8 p.m. on Fridays, 7 p.m. on Mondays, Tuesdays, and Wednesdays, from August to April inclusive, and 8 p.m. for the rest of the year; and 9 p.m. on Saturdays from August to April and 10 p.m. from May to July. Mr. G. C. Richardson asked if fancy dealers, who sought exemption from early closing, could sell a glass rose bowl, obtained from a wholesale fancy house, and not from a wholesale glass house, after the hours specified, and Mr. Strofton said he should object to such a sale. Another trader said that Mr. Richardson must confine himself, during the scheduled hours of closing, to his fancy trade, and not sell glass and china after the closing hours. It was intimated that an Order would be issued embodying the hours named.——Surrey County Council on April 26 issued notice of the intention to make an order for glass and china dealers at Leatherhead to close each Wednesday at 1 p.m.——Essex County Council have issued orders for glass and china dealers at Clacton-on-Sea and Frinton-on-Sea to close each Wednesday at 1 p.m., with exemption at Clacton during June, July, August, and September, and at Frinton during July, August, and September.——Flint County Council have issued a draft order for glass and china dealers at Holywell to close at 7.30 p.m. on Monday, Tuesday, Wednesday, and Thursday, at 9 p.m. on Friday, and at 10 p.m. on Saturday, during January, February, March, April, May, June, October, November, and December; and at 8 p.m. on Monday, Tuesday, Wednesday, and Thursday, 10 p.m. on Friday, and 11 p.m. on Saturday, during July, August, and September, the order not to apply to the day before Good Friday, Christmas show night, and Christmas Eve. The selection of the early closing day is left to individual traders. Objections or suggestions with reference to the order must be sent to the Home Secretary before May 24.——The West Riding of Yorks. County Council have made an Order suspending half-day closing at Ilkley for the glass and china trade during June, July, August, and September.——Bath City Council have issued an Order for glass and china dealers in the city to close each Thursday throughout the year at 1 p.m.

NEW COMPANIES, COMPANY REPORTS, &c.

Hoods, Ltd.—The report states that, including £558 brought down, the accounts for 1912 show a net profit of £4,073. A dividend of 8 per cent. has been declared, and £967 transferred to the general reserve fund, raising it to £10,000, leaving £824 to be carried forward.

Sunderland Pottery Co., Ltd.—Registered capital £5,000 in £1 shares. Objects, to carry on the business of manufacturers of pottery goods of all kinds, &c. Private company. The first directors are E. Neilar, W. L. Pattison, and Mrs. J. A. Pattison. Registered office, Millfield, Sunderland.

Morris (Hanley), Ltd.—Registered capital £600 in £1 shares. Objects, to take over the business of an earthenware and china manufacturer carried on by J. Williams at Nelson-road Works, Hanley, as W. A. Morris &

Co. E. J. Webster, 115, Coper-avenue, Tunstall, is permanent governing director. Private company.

C. W. Wilson & Sons, Ltd.—Registered capital £10,000 in £1 shares; to take over the business of glass and china merchants carried on by R. B. Wilson and T. Wilson at 86 and 87, High-street West. 32 and 39, Castle-street. and 7 and 8, Dunning-street. Sunderland, as C. W. Wilson & Sons. The persons named are the first directors. Private company.

West Carclaze China Clay Co., Ltd.—Registered capital £12,000 in £1 shares. Objects, to carry on the business indicated by the title, and to adopt an agreement with the South West Carclaze Co., Ltd., and E. J. Hancock. Private company. The first directors are A. Phillips, D. Phillips, H. Phillips, W. H. Nicholls, S. Martin, R. H. Luke, and W. Martin.

J. T. Price & Co., Ltd.—Registered capital £5,000 in £1 shares. Objects, to carry on the business of manufacturers of and dealers in red and blue bricks, &c., to acquire certain freehold property and works at Kingswinford, Staffs, and to adopt an agreement with J. T. Price. Private company. The first directors are J. T. Price (managing director) and A. H. Price.

Midland Pipe Co., Ltd.—Registered capital £5,000 in £1 shares; to carry on the business of manufacturers and dealers in pipes, bricks, sanitary appliances, terra-cotta, china, and other earthenware, &c.; to acquire the business carried on at Polesworth, Warwickshire, as the Midland Pipe Co. Private company. The first directors are W. C. Williams and N. C. Williams (managing director).

W. Moorcroft, Ltd.—Registered capital £2,000 in £1 shares (1,300 "A" and 700 "B"). Objects: To carry on the business of potters, manufacturers of Florian ware, faience, plain and decorated stoneware, earthenware, china, fireclay, drain and water-pipes, bricks, tiles, &c. Private company. The first directors are W. Moorcroft and A. E. Lasenby. Registered office: Glendair, Trentham, Staffordshire.

Charles Waine, Ltd.—Registered capital £7,000 in £1 shares; to carry on the business of manufacturers, potters, dealers in china, earthenware, sanitary stone, porcelain, parian and ceramic ware, tiles, glass, &c., and to adopt an agreement with C. Waine for the acquisition of the business carried on by him at Longton. The subscribers are A. G. Alcock, Basford, Stoke-on-Trent, china manufacturer; R. T. Lewis, Belgrave-road, Newcastle, Staffs., china manufacturer. Private company. The first directors are A. G. Alcock and R. T. Lewis. Registered office, Derby Works, Sutherland-road, Longton.

Liens, Debentures, Satisfactions, &c.—Cornish Kaolin, Ltd., London, E.C.—Registered £2,350 debentures, part of £25,000; secured by general charge.——Kilner (John) & Sons, Ltd., Wakefield.—Registered £12,000 debentures; secured by general charge.——Kinson Pottery, Ltd., Parkstone.—Registered £15,000 debentures (re-issue), having benefit of trust deed of Jan. 1, 1897; secured by charge on freehold property, potteries, plant, book debts, &c., also a general charge.——Triplex Safety Glass Co., Ltd., London, W.—Registered £3,500 debenture, to Cox & Co.; secured by general charge; also satisfactions registered for amounts of £2,500, £2,500, and £2,500.—South Wales (Siemens' Patent) Glass Manufacturing Co., Ltd., Newport (Mon.).—Registered £12,000 debentures, amount of present issue being £4,725; secured by general charge, subject to prior charge.

United Glass Bottle Manufacturers, Ltd.—Registered capital £600,000 in £10 shares (26,000 preference and 34,000 ordinary). Objects, to carry on the business of manufacturers, importers and exporters of and dealers in glass, bottles, looking-glasses, bottle stoppers, china, pottery, porcelain and other receptacles; to acquire the businesses of Cannington, Shaw & Co., Ltd., Nuttall & Co. (St. Helens), Ltd., and Robert Candlish & Son, Ltd.; and the property used in connection therewith; also to acquire the business of glass bottle manufacturers carried on by G. E. Alexander and E. Alexander at Hunslet, Leeds, and Southwick-on-Wear and Blaydon-on-Tyne; and to adopt agreements (1) with J. S. Cannington and 24 others; (2) with G. E. Alexander, E. Alexander and E. F. Oldham; and (3) with R. Boughton, G. E. Alexander and F. O. Collier. The first directors are: J. J. Candlish, the Bottle Works, Seaham Harbour; J. S. Cannington, Exchange Chambers, Liverpool; W. L. Shaw, Sherdley Glass Works, St. Helens; F. R. Dixon-Nuttall, Ravenhead Glass Bottle Works, St. Helens; and G. E. Alexander, 85, Gracechurch-street, E.C. Registered office, 90, Cannon-street, E.C.

St. Austell China Clay Works, Ltd.—An extraordinary general meeting was held in London on April 9, to consider a resolution providing for the reduction of the capital of the company from £44,000 to £24,000, divided into 4,000 7 per cent. cumulative preference shares of £1 each and 40,000 ordinary shares of 10s. each, the reduction to be effected by reducing the nominal amount of the ordinary shares from £1 to 10s. Mr. D. George Collins (chairman of the company) presided, and, in moving the resolution, said that there was an adverse balance of £11,928. They had had to contend with mining difficulties which were never anticipated, and it was owing to these causes that they had not been able to show any profit on working. They were now, however, earning profits every day that the mine was being worked. What the directors considered most anxiously was how quickly they could declare a dividend. They could see their way clear, if the proposals to reduce the value of the ordinary shares by one-half were carried, to pay the preference shareholders not only all their dividends due to date by June of the present year, but also that the ordinary shareholders would receive a dividend during 1914. It was intended to wipe off the balance-sheet the whole of the adverse balance of £11,900, together with the flotation charges, the discount and commission on debentures and preference shares sold, and the major portion of the works development account. After providing for these reductions any profits could immediately be paid to the shareholders. During the year they had been producing clay on an average of 140 tons per week, and the clay had all been sold at extraordinarily high prices. The whole of their output for 1913 had been booked at those prices, and there were many anxious buyers for their output of 1914; but they had made no contract for that year, believing that prices would probably rise to a higher level than they were at the present time. They had an inexhaustible supply of clay on their property. The lease of twenty-one years had been renewed for a term of forty-two years, and that would be effected by paying 3d. per ton royalty in excess of what they were paying for the first twenty-one years. The resolution was agreed to.

TENDERS ACCEPTED.

For the Aylesbury U.D.C.:—Glass, Middleton Bros.

For the Kettering Guardians:—Crockery, S. Clowes & Co.

For the York Guardians:—Crockery ware, Mr. R. Brown.

For the Eastry Guardians:—Crockery, Mr. W. J. Akhurst.

For the Bolton Guardians:—Crockery, Mr. G. Batten, Knowsley-st.

For the Mutford and Lothingland Guardians:—Crockery, Mr. W. B. Cooper.

For the Cheltenham Guardians :—Crockery and earthenware, Mr. C. Fletcher.

For the Waterloo U.D.C. :—Glass, T. Rowlands & Sons, 89, Duke-st., Liverpool.

For the Uxbridge Union :—Earthenware, Mr. C. Hall, Uxbridge. £25 15s. 10d.

For the Lewisham Guardians :—Himsan & Co., Islington, earthenware. £249 5s. 8d.

For the Leeds City Council :—Glass, &c., Pilkington Bros. and E. Allen & Co.

For the Colchester City Council :—Joslins, Ltd., Colchester, glass, for one year.

For the Farnham Guardians :—Glass and crockery, Lintern & Peters, Farnham.

For the Barnet Union :—Earthenware, china, and glass, Mr. W. Huntsman, Islington.

For the Brentford Guardians :—Earthenware, glass, &c., L. Finney & Co., £150 13s. 3¾d;

For the Bournemouth County Borough Council :—Glass, Pilkington Bros., Ltd., St. Helens.

For the Wycombe Guardians :—China and earthenware, Mr. J. Grower, Princes, Risborough.

For the Derby Town Council :—Earthenware, Derby Brick Co., Brookhouse, Johnson, Ltd.

For the South Stoneham Guardians :—Earthenware, Payne & Sons, High-st., Southampton.

For the Folkestone Town Council :—Middleton Bros., London, glass, for one year, £32 16s. 3d.

For the Warrington Guardians :—Mr. R. Bailey, Warrington, crockery ware, for six months.

For the Wandsworth Guardians :—Earthenware, W. Adams & Co., Greenfield Potteries, Tunstall.

For the Metropolitan Asylums Board :—Price, Powell, & Co., Bristol, hot-water bottles (central stores).

For the Committee of Management of the Down Asylum : Earthenware and glassware, R. Hogg & Co., Belfast.

For the Eastleigh and Bishopstoke U.D.C. :—Cooper & Co., crockery, for the isolation hospital, £7 18s. 3d.

For the Isle of Thanet Guardians :—Crockery, Mr. C. Lednor (workhouse), £24 4s. 9d., (cottage homes) £3 0s. 6d.

For the Hull Corporation :—Glass and porcelain, for schools, Mr. E. B. Atkinson, Hull, £104 12s. 6d. ; and A. Brown & Sons, Hull, £831 11s.

For the Lambeth Guardians :—Maple & Co., Ltd., 28 sets white toilet ware, for the new nurses' home, 4s. 6d. per set ; W. Adams & Co., crockery and glass.

For the Merthyr Tydfil Guardians :—Mr. T. F. Vining, Merthyr, earthenware, for the workhouse, for one year ; Mr. W. Davies, Aberdare, earthenware, for the Training School and Cottage Homes.

For the following contract has been in Victoria by the Commonwealth or State Government :—Post and Telegraph : Brunswick Brick T. and P. Works, 16,646 glzd. earth conduits, 2 ducts, £1,994 1s. (for Queensland).

For the L.C.C. :—Insulators and porcelains for electric trackwork (Schedule No. T13), Bullers, Ltd., 6, Laurence Pountney-hill, E.C., 3 items ; Doulton & Co., Ltd., Lambeth, S.E., 1 item ; Taylor, Tunnicliff & Co., Ltd., Eastwood, Hanley, Staffs, 1 item.

For the supply of mugs for the children attending the elementary schools in the county borough as a memento of the Royal Visit on April 22 and 23, for the Stoke-on-Trent Education Committee :—Mr. T. Wood, Hanley ; Soho Pottery, Ltd., Cobridge.

Government Contracts let during March :—War Office Dept. : Earthenware, W. Adams & Co., Tunstall, Staffs. ; Doulton & Co., Ltd., Burslem ; Mintons, Ltd., Stoke-on-Trent ; Worcester Royal Porcelain Co., Ltd., Worcester. Broadmoor Asylum : Earthenware, J. Green & Nephew, Ltd., 107, Queen Victoria-st., E.C.

At the April sitting of the Gillingham (Kent) Town Council some objection was taken to the action of the Park Committee in accepting out of three tenders that of Richard Sankey & Son, Ltd., for the supply of flower pots, the firm's price being £6 15s. Mr. F. Thornton expressed the opinion that the pots could be as well and as cheaply supplied locally, adding "Indeed, a local trader would be preferable with regard to breakages." Mr. H. Hepworth explained that the price included delivery to the park, and all breakages to be made good. He did not think they could get the pots locally at the price with free delivery and replacement of breakages. Mr. W. H. May inquired whether local firms had had an opportunity of tendering, and was given a negative reply. Mr. H. Hepworth : It is hardly fair after the prices have been made public for a local tradesman to say he could do it cheaper. The Mayor ended the matter by saying that no action could be taken as probably the pots had been delivered.

CONTRACTS OPEN.

The directors of the Cambrian Railways Co. invite tenders by May 15 for glass for a year. Tender forms (No. 16) can be obtained from the Stores office, Cambrian Works, Oswestry (Salop).

The Visiting Committee of the Gateshead Borough Asylum, near Stannington, Northumberland, invites tenders by May 31 for crockery, glass, &c. Tender forms can be had from the Town Clerk, Mr. W. Swinburne, Town Hall, Gateshead.

Tenders will be received at the office of the Deputy Postmaster-General, Hobart, up to June 9, for the supply of glassware for batteries and porcelain insulators. A deposit of 5 per cent. on the first £1,000, and of 2½ per cent. on the amount above that sum, is required with each tender. Local representation is necessary. Forms of tender can be obtained from the High Commissioner for the Commonwealth of Australia, 72, Victoria-street, S.W., where also preliminary deposits may be paid.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette," and are strictly copyright.

Bradford's Bazaar has been opened at Twickenham by Mr. A. E. Bradford.

Minshall & Jones, ironmongers, &c., High-st., Bala, are about to open a new department of china, &c.

Anderson & Smith, plumbers, glaziers, &c., of Blackpool, are opening a department for earthenware, &c.

Anscombe & Sons, drapers, &c., Harpenden (Herts.), have opened new showrooms for china and glass.

Ed. Flageollet & Co., Ltd., merchants, agents, and brokers, have removed to larger offices at 72 and 74, Victoria-street, S.W.

Mr. H. A. Tilly, glass and china dealer, is vacating his premises at King's-road, Southsea, Portsmouth, owing to the expiration of lease.

Dressler Tunnel Ovens, Ltd., have removed from 2A, Wetherby-terrace, Earl's-court, S.W., to Cremorne Wharf, 27, Lots-road, Chelsea, S.W.

Porcelain Heels for silk and satin evening shoes are among the latest eccentricities of fashion in Paris.

The Shops Act.—The Home Office has issued a revised edition of the official memorandum on the law relating to shops. A section has been added dealing fully with the new provisions relating to refreshment premises contained in the Shops Act, 1913, and explanations have been added on one or two points not dealt with in the previous edition. The price of the memorandum is one halfpenny.

Foreign Notes.

The Disastrous Floods in the United States have done a good deal of mischief in the East Liverpool district of Ohio. The Ohio river and its tributaries rose very rapidly to an unprecedented height, and although fortunately the waters quickly subsided again, the Nielson pottery was almost destroyed, and several other potteries and glass-works were severely damaged.

The Barnett-Schaffer-Connor Co., Inc., is being formed at New Orleans to amalgamate three large firms. The officers of the company are :—Max Barnett, president and general manager ; J. P. Schaeffer, treasurer and assistant manager; and Lewis S. Connor, secretary, and manager of the china department. It will be one of the largest retail furniture houses in the United States. The capital is $200,000. It is proposed to erect a five-story building at 537-47, inclusive, in Baronne-street. The new firm will have a large department for china and cut glass.

Mr. J. Pierpont Morgan, who died last month, left his priceless collection of pottery to his son, Mr. Pierpont Morgan, jun., with the expressed wish that he will carry out his father's intention, which the latter had not time to effect, "to make some suitable disposition of them, or of such portions of them as I might determine, which would render them permanently available for the instruction and pleasure of the American people." It is universally believed that the greater part of the collection will ultimately find a home in the Metropolitan Museum of New York.

Projected Porcelain Works in Brazil.—It is reported that the discovery of a deposit of kaolin in Rio Grande do Sul has induced the State Government to pass a law which is highly favourable to the erection of porcelain works, the provisions of the measure including freedom from taxation for a number of years, and admission of the necessary machines and utensils duty free. The right of working the deposit has been acquired by a firm in Porto Alegre ; and since the experiments made with the clay in France have yielded good porcelain a works is to be established with French capital.

Death of Mr. B. F. Drakenfeld.—It is with deep regret that we announce the death of Mr. B. Ferdinand Drakenfeld, senior partner of the firm of B. F. Drakenfeld & Co., importers of potters' chemicals, colours, &c., 27, Park-place, New York City, U.S.A. Mr. Drakenfeld passed away on March 28, at the age of 63 years. Though a German by birth, he had spent nearly all his life in the United States. He was formerly in the employ of J. Marsching & Co., but ultimately became principal of the firm and changed its title to B. F. Drakenfeld & Co., taking his son into partnership.

The German Pottery and Glass Industry.—According to reports from a number of industrial districts, published in the German Labour Gazette, the stoneware industry is fairly active, though the uncertainty in the political situation, and the tension of the money market has produced a certain hesitation among buyers. The same applies to the porcelain industry. So far as the glass-makers are concerned, those engaged in the production of laboratory appliances, tube glass, optical glass, and lamp glasses are very busy, but the window and plate glass works are quiet, business being not so good as in the corresponding period of last year. The unfavourable condition of the building trade is causing dealers to keep back their orders.

French Tariff on Alumina Fireproof Ware.—A French Customs Circular, quoted by the "Board of Trade Journal," notifies that, disputes having arisen as to the application of the duty of 1 fr. per 100 kilogs. gross weight to fireproof bricks and wares "with base of alumina" (Tariff No. 332, paragraph 1), the Comité consultatif des Arts et Manufactures propose that such goods shall be regarded as "with base of alumina," if they contain more than 30 per cent. of alumina. But, having regard to the possibility of error in the analysis and the possible variation of the percentage content of alumina in different samples of the same consignment, the Committee finally propose to fix 32 per cent. of alumina as the dividing line between bricks and wares "with base of alumina" and other fireproof bricks and wares. This Minister of Finance has rendered a decision in accordance with this proposal, which decision was to take effect as from April 1.

The International Plate Glass Syndicate.—According to the "Frankfurter Zeitung" the International Plate Glass Syndicate has decided to close down the works of the Syndicate for 30 days during the second quarter of 1913, compared with 33 days during the previous quarter. This means a fairly large increase in production. In some circles this decision came rather as a surprise, as, although trade has been good during the last few months, it was not considered sufficiently brisk to warrant the increase of the number of working days. It is also thought that the Syndicate, by increasing production, intends to discourage the proposed erection of new glassworks, which would tend to bring about a premature dissolution of the Syndicate. It is rumoured that new glass works are being built in Reisholz (Germany) and another in the Province of Hennegau (Belgium). Business on the whole has not been much affected by the war in the Balkans, so that there are no very large stocks of plate glass held at works.

German Imports and Exports of China Clay, &c.—According to official satistics, the total imports of kaolin and china clay into Germany in 1912 amounted to 323,769 metric tons (281,750 tons in 1911), to the value of 11,656,000 mk. (10,143,000 mk.), 5,803 tons (7,208) coming from Denmark, 143,706 tons (110,148) from Great Britain, and 166,449 tons (156,745) from Austria-Hungary. The exports totalled 37,609 tons (34,651), valued at 1,304,000 mk. (1,186,000 mk.), 11,404 tons (12,672) going to Austria-Hungary, 9,677 tons (9,288) to Russia, and 7,239 tons (6,927) to Switzerland. In ordinary pottery clay, fire-clay and pipeclay the imports were 225,586 tons (222,580), valued at 3,226,000 mk. (3,193,000 mk.), of which 29,826 tons (28,776) came from Belgium, 24,294 tons (19,225) from Great Britain, 30,625 tons (35,874) from Holland, 113,234 tons (117,165) from Austria-Hungary, and 15,258 tons (6,894) from Switzerland. The exports amounted to 364,315 tons (333,373), valued at 4,885,000 mk. (4,267,000 mk.), 72,913 tons (5,808) being shipped to Belgium, 74,636 tons (69,435) to France, 4,688 tons (3,822) to Great Britain, 73,440 tons (73,555) to Holland, 69,801 tons (63,743) to Austria-Hungary, 21,098 tons (18,873) to Russia, 16,202 tons (18,401) to Switzerland, and 14,547 tons (14,265) to the United States.

Proposed Pennsylvanian Pottery Regulations.—Manufacturers in the British Potteries who are inconvenienced by the observance of special rules and regulations will read with sympathy the following remarks by the editor of the New York "Crockery & Glass Journal," which appear under the heading "A Ridiculous Measure." Our worthy confrère writes : "The Bill before the Pennsylvania Legislature for the prevention of disease in factories where lead is used in manufacturing processes is simply silly. In addition to the most stringent regulations designed to protect the employees from contact with lead dust, among which are adequately lighted and ventilated work-rooms separated by partitions and cleaned

daily, hoods connected with an air exhaust through a cloth dust collector, and other precautionary devices, the employer must provide wash-rooms with hot and cold water—one wash-room for every five persons—nail brushes, soap, and at least three towels per week for each employee. Time allowance of ten minutes before the lunch hour and also at closing time to be at the employer's expense. He must provide at least one bath for every five employees, hot and cold water, soap, and at least two clean bath towels per week for each employee. The same time allowance is made for the use of the baths. Dressing-rooms with sanitary lockers must be furnished and kept clean by the employer. Eating-rooms separate from the work-rooms, with tables and seats, and equipped with sanitary drinking fountains always accessible to the workers, must be maintained. The employer is also to furnish at least two pairs of overalls and two 'jumpers,' repair and renew the same when necessary, and pay the cost of keeping them always clean. The operatives are not allowed to remain in the work-rooms during meal hours, and must be examined at intervals by a physician engaged by the employer. If this preposterous measure ever becomes a law it will drive a number of manufacturers out of business. To follow the directions regarding the work-rooms alone would necessitate the rebuilding of almost every pottery in the country.''

The Leipzig Fair.—Our Saxon correspondent sends us the following further particulars as to the business done in ceramics at the 1913 Leipzig Spring Fair. The exhibitors this year comprised several first-class firms, and a whole lot of middle-class and small concerns. In certain articles, and more especially in ornamental chinaware, offerings bore unmistakable signs of over-production. A fair number of new competitors also exhibited this year. There were many buyers from both home and abroad, and a fair percentage of the exhibitors are satisfied with the business done. Quite a large number of buyers were present from North America, but, with only few exceptions, they merely placed some small sample orders. On the Continent France was the best buyer, as that country is paying increased attention to German porcelain ware. Very fair business was also done with Russia, especially in art and other ornamental articles. Imitation Meissen goods and oval and round baskets also sold well. Ultra-modern designs and grotesques did not meet with much favour, but plastic figures met with a fair demand. The German porcelain industry is now apparently threatened by Japanese competition; at present it is not felt much, but it is feared that soon it will assume dangerous dimensions. China utensils did not do so well as usual, owing to the lack of stock orders from North America. On the contrary, South America was a good buyer, especially of cheap lines. Fine table sets sold well to Russia, and some very satisfactory indents for medium lines were placed by Scandinavia and Holland. Business with Austria showed a decline. German inland towns were also poor buyers. Warehousemen placed good orders, but gave the preference exclusively to outsiders, as they have boycotted the factories belonging to the Convention. Decoration and designs now favour floral patterns mostly. Business in crockery was quite up to expectations, and the best buyers were France, America, England, Russia, and Italy. The quality of the goods displayed had much improved, and this has favoured the increased consumption. Increased interest was shown for art faience goods, with hand-painted designs. In majolica business was steady, but by no means brisk; South America and France were good buyers, especially of Moorish and Assyrian styles. Terra-cotta was dull; prices were poor, and nothing new was shown. Marble goods of all kinds did well. Taken all round, the business comes up to the standard of an average fair at Leipzig.

Empire Notes.

Mr. Harold Emery, of Olifantsfontein, Transvaal, formerly of Hanley, is at present in England on a combined business and pleasure trip. We had the pleasure of conversing with Mr. Emery at our office during April, and learnt some interesting facts concerning the pottery which he has helped to establish in S. Africa. At a later date we hope to give our readers some fuller particulars.

Trade Openings in Canada.—A meat company in Alberta are building a new packing plant. The building, which will be finished in white glazed tiles or terra cotta, will be four storeys high. The ground floor and interior walls will also be tiled. The name of the company may be obtained by manufacturers in the United Kingdom on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., mentioning THE POTTERY GAZETTE. A Montreal firm desires the agency of United Kingdom manufacturers of earthenware closet bowls. For further information application should be made to the High Commissioner for Canada, 17, Victoria-street, S.W., mentioning THE POTTERY GAZETTE.

The Pottery Trade in Australia.—Early in March a representative of THE POTTERY GAZETTE had the pleasure of interviewing Mr. A. Sniders, of S. Schneiders & Son, exporters of pottery, &c., at his office at 25, Old-street, E.C. Mr. Sniders has just returned to England after a five years' stay in Australia, and he kindly imparted some useful information concerning the position of affairs in that market. Trade generally, he said, including the pottery branch, was at present slightly depressed, but the prospects for a gradual improvement were hopeful. Future developments will depend very largely upon the progress of the agricultural industries. At present the population is sparse in the extreme, being in some of the States considerably less than one person per square mile. Moreover, a very large proportion of the population is centred in the few great cities. Outside these the trading centres are small and widely scattered, which renders the work of opening up the markets and introducing new goods decidedly difficult. Immigrants trickled in slowly, and the attitude of the Commonwealth Government towards them was open to criticism. With regard to the position of English pottery in particular, Mr. Sniders stated that in dinner ware and earthenware goods generally the Old Country was still supreme. In cheap china German competition was very strong, but German wares had suffered to a far greater extent than the English from the inroads of cheap Japanese porcelains. The preferential duties were of little use to importers of British wares. In spite of freight and tariff disadvantages, however, British manufacturers were likely to maintain their position in the market, provided the present advance in selling prices was not carried too far. A question as to whether the packing of pottery was more satisfactory than it used to be, elicited the reply that on the whole the packing was now very well done, toilet ware being the only exception. Wares intended for the Australian market sold entirely upon their own merits, manufacturers' names carrying practically no weight. The bulk of the goods demanded were of a showy and substantial character, and the opening for the very choicest varieties was small at present, though likely slowly to develop. The market had not been improved in this respect by the practice of some manufacturers who sent out large consignments of seconds and inferior lines.



EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR MARCH, 1913.

		Quantities.				Value.			
		Month ended March.		Three Months ended March.		Month ended March.		Three Months ended March.	
China or Porcelain, Earthenware and Pottery:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	4,616	2,241	11,561	9,863	£6,433	£4,296	£16,851	£16,349
„ France	„	4,673	6,902	27,476	21,387	8,069	8,283	22,958	27,161
„ United States of America	„	24,627	25,834	70,184	70,218	34,925	38,217	97,539	104,030
„ Brazil	„	38,248	30,415	120,820	95,306	18,325	24,958	58,032	73,573
„ Argentine Republic	„	21,825	34,453	91,222	108,062	19,923	22,885	68,158	81,913
„ British South Africa	„	11,104	10,024	25,764	35,689	11,943	12,236	31,092	37,967
„ British East Indies	„	34,499	31,515	116,783	105,130	20,191	22,533	65,474	67,236
„ Australia	„	24,664	23,939	77,552	74,622	30,033	28,852	90,080	83,701
„ New Zealand	„	7,045	7,621	26,727	22,288	10,035	10,896	36,478	32,327
„ Canada	„	31,347	45,634	81,990	132,541	31,174	38,894	88,570	113,544
„ Other Countries	„	94,195	116,793	274,968	299,561	62,821	63,540	178,005	194,939
Made up as follows:									
Porcelain, Chinaware, and Parian	„	1,361	1,535	3,880	4,471	12,229	15,953	35,894	44,787
Floor Tiles for Tesselated Pavement	„	6,891	5,087	17,839	18,904	7,204	4,365	19,299	17,592
All other Tiles (except Roofing and Street Paving)	„	9,384	14,647	31,853	43,714	9,794	15,315	31,483	45,527
Sanitary Ware	„	28,083	29,792	83,925	94,366	41,547	45,251	115,407	140,297
Electrical Ware, Door Fittings, and Chemical Ware	„	2,574	4,625	12,316	19,105	3,000	5,215	11,211	14,134
Other Earthenware (including Semi-Porcelain and Majolica)	„	120,969	121,372	359,372	359,983	156,963	160,317	468,729	482,598
Jet, Rock'm, and Glazed Terra-cotta	„	176	934	886	3,296	337	679	1,295	2,831
Red, Stone, Brown and Yellow Ware	„	127,405	157,379	414,976	430,828	22,798	28,495	69,919	84,974
Glass.									
To British South Africa	value £	—	—	—	—	8,897	8,227	26,328	28,101
„ Other Countries	„	—	—	—	—	136,942	130,134	408,293	412,530
Made up as follows:									
Plate Glass	cwts.	17,886	22,316	55,273	71,586	28,968	33,914	92,170	113,540
Flint Glass	„	7,874	5,959	24,956	20,458	24,322	21,654	76,259	75,673
Glass Bottles	gross	86,327	69,542	245,997	228,027	54,160	44,084	151,585	137,838
Glass Manufactures, other sorts	cwts.	54,061	49,289	160,252	142,598	38,389	38,709	114,607	113,580

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR MARCH, 1913.

Porcelain, Chinaware, and Parian	cwts.	3,455	3,833	9,289	10,121	18,042	19,592	46,120	50,456
Floor Tiles for Tesselated Pavement	„	90	52	160	63	25	41	128	60
All other Tiles (except Roofing and Street Paving)	„	2,558	3,648	6,867	8,129	1,520	2,289	4,389	5,303
Sanitary Ware	„	28	6	256	37	59	17	503	76
Electrical Ware, Door Fittings and Chemical Ware	„	3,260	2,314	7,848	8,617	4,284	3,923	11,682	13,894
Other Earthenware (including Semi-Porcelain and Majolica)	„	27,898	29,061	72,808	74,478	55,986	61,759	144,689	154,215
Jet, Rock'm, and Glazed Terra-cotta	„	8	81	17	285	24	168	70	548
Red, Stone, Brown and Yellow Ware	„	23,493	32,320	84,694	85,865	6,288	7,002	16,405	18,345
Window and German Sheet Glass	„	120,306	100,227	359,739	335,721	66,750	55,202	202,781	185,435
Plate Glass	„	25,659	46,949	89,359	126,377	33,777	55,509	113,061	149,408
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	„	69,743	78,637	205,315	228,859	104,543	106,932	304,581	313,589
Glass Bottles	gross	158,998	172,228	440,442	505,026	66,708	70,300	188,950	208,045
Glass Manufactures, unenumerated	cwts.	865	278	4,473	768	699	471	3,959	1,739

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR MARCH, 1913.

Porcelain, Chinaware, and Parian	cwts.	1,027	1,067	2,790	3,226	5,653	5,549	15,115	17,119
Of all Other Sorts	„	422	431	1,287	3,088	736	1,012	2,554	4,359
Window and German Sheet Glass	„	477	661	2,208	1,768	253	400	1,195	1,021
Plate Glass	„	191	251	1,108	2,795	286	407	1,627	3,406
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	„	953	854	3,316	2,531	2,930	2,719	9,115	8,477
Glass Bottles	gross	4,934	3,582	11,446	12,792	2,687	1,907	6,148	6,619
Glass Manufactures, unenumerated	cwts.	51	90	854	343	35	60	989	262

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Feb. 27, 1913, to Mar. 26. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to Mar. 26. Packages.	Corresponding Period, 1912. Packages.
Boston	1,010	552	2,094	1,797
New York	754	784	2,599	1,830
Baltimore	462	796	1,790	2,383
Philadelphia	264	323	659	835
New Orleans	135	47	341	194
Newport News ...	14	14	35	45
San Francisco ...	138	155	313	327
Portland, Maine .	288	133	963	427
Galveston	12	61	12	147
Portland, Oregon	5	18	69	44
Inland Points ...	31	54	198	142
Total	3,113	2,937	9,073	8,171

Legal.

The Shops Act.—At Newport (Mon.), Dukes & James, glass and china dealers, Clarence-place, Newport, were on April 7 summoned for a breach of the Shops Act by failing to close their premises for business at 7.30 p.m. on Easter Monday. The Bench convicted, and imposed a fine of 10s. 6d., including costs.

Disputed Sale of a Dinner Service.—An interesting case was heard at Nottingham County Court on April 16 by Judge Allen, Mr. A. G. Darby, glass and china dealer, Market-street, Nottingham, being sued by Wm. Hickson for the delivery of a dinner service purchased and paid for on Feb. 8 last. Plaintiff stated in his evidence that seeing a service of 70 pieces exhibited in defendant's window for £2 2s., he entered and asked for it, the assistant observing that it was very cheap. After examining the lid of the soup tureen, she sold him the service, allowing 1s. discount for cash. Later the defendant declined to deliver the service on the ground that there had been a mistake in the price. For the defence it was asserted that the assistant told the plaintiff that there must be some mistake in the price, but plaintiff insisted on having the goods at the price named. The retail selling price of the service was £3 15s., and defendant had explained the matter to the plaintiff, returned the £2 1s. paid, and endeavoured to arrange the matter. In the meantime the service had been sold to another customer. The Judge said the sale was completed, and plaintiff was fully entitled to the goods he had purchased. He adjourned the case for two months to enable Mr. Darby to supply a similar service to that purchased by the plaintiff.

A Wine Glass Transaction.—In the City of London Court, on April 24, before Judge Rentoul, K.C., a claim was made by Johnsen & Jorgensen, Ltd., 26 & 27, Farringdon-street, against Mr. H. G. Down, The Drive, Fulham Park-gardens, to recover £58 0s. 8d. for wine glasses supplied in the way of trade. The defendant said the amount claimed by the plaintiffs was excessive, and that he owed £47 16s. 8d. instead of the amount claimed. When the wine glasses arrived there were breakages to the value of £11. The goods were sent through Pickford & Co. Judge Rentoul said Pickford & Co. might be to blame for the breakages, or the plaintiffs, or the persons who unpacked the wine glasses. The defendant said they were delivered direct to his customers, that he did not unpack them, but sent them forward. His customers said they were broken, and he had to make an allowance amounting to £11. Judge Rentoul said it was a very complicated case, and if he sent the case to the Registrar to take the accounts the matter might occupy the whole day investigating. The plaintiffs had better take judgment for the amount admitted by the defendant, particularly as he did not think that judgment would be worth very much to the plaintiffs having regard to the defendant's position. That course was ultimately adopted and judgment entered for the plaintiffs for £47 16s. 8d.

Workmen's Compensation and Lead Poisoning.—(From our Potteries Correspondent.)—The difficulty in accurately diagnosing the cause of death in the case of lead workers was exemplified in a compensation case heard at the Longton County Court on April 15. The applicants were the widow and other dependents of John Eyre, aged 58, who resided at 65, Belgrave-road, Dresden, Longton, and who died on January 27 last. The respondents were Cartwright & Edwards, china manufacturers, Longton. Counsel for the applicants said the deceased had been a glost placer for 41 years, and for the last seven years had been engaged with the respondents. In 1908 a blue line on the gums was reported, and also weakness of the wrist. In the six months prior to January 11 there were symptoms such as were attendant upon a case of lead poisoning. Death took place on Jan. 27, and a post-mortem examination, followed by an inquest, was held. After that inquiry, the applicants, not being satisfied, instructed two doctors to conduct a second post-mortem examination. Counsel said the point in dispute would not be that the man had not been suffering from lead poisoning, but whether, in fact, the lead poisoning either caused or accelerated death. For the applicants, two doctors said the primary cause of death was lead poisoning, and the secondary bronchitis and congestion of the base of the left lung. For the respondents, another doctor said the cause of death was congestion of the lung following on chronic bronchitis. At this point the judge retired and discussed the matter with counsel on both sides, and eventually the application was withdrawn on payment of an agreed sum. The Judge said under the extremely difficult circumstances the applicants were wise in accepting the offer which had been made, although the amount was not so large as they would have received had they succeeded in their application.

Dispute in the Glass Bottle Trade.—At the April sitting of the Pontefract County Court, Judge Benson decided an action in which Jackson Bros., glass bottle manufacturers, Knottingley, sued Geo. Warwick, commission agent and factor, of Blackfriars, London, for £62 5s. 8d., balance due on goods supplied from Oct. 10 to Nov. 12, 1912. The total account was £219 18s. 7d., but allowances for freight, carting, loading, and rebate, with a cheque for £97 12s. 10d. reduced the balance to the sum claimed. The defendant paid into court £5 and costs in settlement, and claimed a set off of £58 19s. 3d. He also claimed that he had returned 238 bags for which the plaintiffs claimed £11 18s., and that under an agreement dated March 30, 1912, he should be charged only for net quantities of bottles actually delivered to clients in good condition. His counter-claim included £25 contribution for agent's office expenses in London. For the plaintiffs it was stated that they were members of a glass bottle combine, and were bound by terms to sell at not less than 17s. 6d. per gross. They agreed to supply the defendant at 14s. 1d. per gross, and the agreement stated that all goods were to be supplied at combine prices and terms, but there was a private arrangement whereby the difference of 3s. 5d. per gross should be made up to the defendant. The latter's contention was that he was only to pay for the number of sound bottles actually delivered which he sold sound. He had never agreed to be responsible for breakages. Plaintiffs' contention was that as the defendant elected to pay carriage their liability ceased when the goods were on rail at Knottingley. Defendant chose the cheaper transit by sea from Hull, and must, therefore, take the responsi-

bility for breakages, as the goods were properly packed. A question arose as to whether the agreement with the defendant was a sham to produce if necessary to combine firms. The Judge held that defendant should under the agreement only pay for bottles delivered sound, and under this claim he allowed him £21 7s. 2d. Defendant must also succeed in respect to the claim for £25 for six months' office expenses, and deducting this £46 7s. 2d. from the £53 9s. 8d., left £7 2s. 6d. for plaintiffs, with costs on the whole claim. Defendant was allowed costs on the two items on which he had succeeded.

Bottle Importers' Claim.—(Special Report.)—Before the Recorder (Sir Forrest Fulton, K.C.) and a jury in the Lord Mayor's Court, on April 15, F. Goddard & Co., Ltd., glass bottle importers, 30, Coleman-street, E.C., brought an action to recover the sum of £30 11s. 10d. from Mr. A. Stiebler, olive oil and preserved goods merchant, 8, Talbot-court, Cheapside, E.C. Mr. Hildersheimer was counsel for the plaintiffs, while the defendant was represented by Mr. H. Brandon. It was stated that the claim was in respect of bottles supplied to the defendant. Goods to the value of £61 15s. 2d. had been supplied, and the defendant had paid or been credited with sums aggregating £31 3s. 4d., leaving a balance of £31 7s. 10d. which was now claimed. After some correspondence an order was given to the plaintiffs by the defendant in April of last year for 50 gross each of ¼ pint, ½ pint, pint, and quart bottles. It was agreed that the goods were to be delivered free to the defendant's warehouse. The first delivery was to take place in June, 1912, and the balance as and when required, but the whole consignment was to be delivered within twelve months. The first delivery was made to the defendant last June. The goods came forward rather more rapidly than they were required by the plaintiffs, who sent the defendant more than he required with the first delivery. A second delivery was made to the defendant on July 2, and by Sept. 27 last five deliveries had taken place. The defendant paid for the first consignment of bottles in August, and subsequently the plaintiffs wrote asking for a further payment. The defendant did not answer the letter. The plaintiffs then tendered a sixth delivery by sending an invoice to the defendant, as they had always done. The defendant then said that he would not take any further deliveries, and pointed out that he had twelve months in which to receive the whole consignment. The plaintiffs placed the matter in the hands of their solicitors, and proceedings were commenced against the defendant, who allowed judgment to go by default. Later the defendant took proceedings to get the judgment set aside. In those proceedings he swore an affidavit, stating that there was an agreement by which he could take and pay for the goods as he liked. For the defence it was said that after having entered into the contract with the plaintiffs an arrangement was made with them whereby the defendant was to take 200 gross of bottles within twelve months, and that he was to warehouse the deliveries made until such time as he required them. In his evidence the defendant said that he had nothing in writing referring to the warehousing of the bottles. The agreement was that he should take the bottles as he required them, but the whole quantity was to be taken within the twelve months. He was not bound to take delivery as the plaintiffs desired. The jury found a verdict for the plaintiffs for the amount claimed, and judgment was entered accordingly, with costs.

A China and Glass Account.—(Special Report.)—In the City of London Court, on April 3, before his Honour Judge Lumley Smith, K.C., the case of Kennedy v. Hiller was mentioned, in which the plaintiffs, A. Kennedy & Sons, Ltd., china and glass merchants, 48, Duke-street, E.C., had recovered judgment against the defendants, Herman Hiller & Co., china and glass dealers, Grainger-arcade, Newcastle-on-Tyne, for £23 14s. 7d., for china and glass goods supplied. Defendants now applied to have the judgment set aside. Mr. Coumbe, defendants' counsel, said that the application was of rather an unusual character. In the absence of the defendants, the plaintiffs had taken judgment against them without any justification whatever. When the plaintiffs sued the defendants they had a good defence as to the quality of the china not being as promised and some of the china was not equal to sample. The case was down for hearing on January 14, and it was adjourned to Feb. 14, with permission to pay money into court, and plaintiffs' costs of the day were to be paid. That had been done. Later on the parties met at the plaintiffs' offices, when an agreement was arrived at by which some of the china was to be returned, defendants were to pay half the solicitor's costs, to give a bill of exchange for the remaining amount due, and to give a new order for £15 worth of china. Defendants had paid the solicitor's charges and performed the other conditions except send a bill for the balance due, and no invoice for that had been sent. In the face of those facts plaintiffs came to the court and took judgment for £10 17s., which was highly reprehensible conduct, seeing that the defendants had been from Newcastle to London twice specially about the matter. Defendants were quite willing to abide by the agreement and did not want to go back on the judgment. Judge Lumley Smith pointed out that there was nothing in writing to the effect that the action was not to go on. Mr. Coumbe said that both of the litigants wrote foreigners' English, and it was not always clear and plain. Mr. Samuel, plaintiffs' counsel, said that all the facts were correctly placed before the Court when the judgment was taken by the plaintiffs. Nothing had been concealed. Defendants did not carry out the terms of the agreement, with the result that judgment was signed in the usual way. Mr. Jack Phillips, of Jones, Lang & Co., Houndsditch, said he was present when the plaintiffs and defendants came to the agreement mentioned. The dispute was settled amicably, as he thought, and plaintiffs were to recoup themselves half their solicitor's costs out of the future business. Mr. Kennedy having given his version of the affair, mentioning that the defendant was financed by Mr. Phillips, added that the defendants had never given him the bills or costs as promised. Defendants had done nothing but humbug him from beginning to end. If the defendants had paid the money the action would have been withdrawn. He (plaintiff) had been in business for 25 years in the City of London. Judge Lumley Smith said he thought that if the defendant had performed the terms of the agreement the action would have been withdrawn. As it was, the judgment must stand with costs.

Preventing Moisture on Shop Windows.—The following preparations are said to be efficacious :—(1) A mixture of 60 parts of soft soap, 30 of glycerine, and 10 of oil of turpentine. (2) Common salt 250 parts, water 1,000, spirits of wine 1,000 parts. (3) A solution of 250 parts of glycerine in 1,000 of spirits of wine.

The Studio Year Book of Decorative Art for 1913 contains a few illustrations of pottery, though this most artistic industry might be more fully represented. The examples include some of Mr. Howson Taylor's "Ruskin" vases and Mr. R. F. Wells' "Caldrum" pottery; art ware, designed for Josiah Wedgwood & Co., Ltd., and the Ashby Potters' Guild; salt glazed ware by Doulton & Co., Ltd., and a few pieces of the famous "Lancastrian Lustre" pottery of Pilkington's Tile and Pottery Co., Ltd. The artistic shapes are well reproduced, but unfortunately the black and white printing can give no idea of the splendid colouring which is one of the chief glories of these types of ware.

AN ANALYSIS OF THE REGULATIONS FOR THE POTTERY TRADE.*

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*** *The comments are set to the full width of the column. Extracts from the Regulations are distinguished by being slightly indented.*

INTRODUCTION.—The New Regulations formulated for the pottery trade are based on the recommendations of the Departmental Committee of the Home Office, presided over by Sir Ernest Hatch, which sat from 1908 to 1910, and of which I was a member. As the inquiries made by this Committee were prolonged and exhaustive, its recommendations may be said to embody the best suggestions that have yet been made on the part of Manufacturers, Workpeople, and the Medical and other Officials of the Factory Department. Previous codes of Special Rules were mainly concerned in outlining the guiding principles by which the health of operatives might be safeguarded. The present Regulations differ from this in so far as they prescribe, in very great detail, specific regulations not only with regard to occupations involving risks to health from lead and flint dust, but also as regards systematic lifting, carrying, and other work by young persons. In the same way the hours of labour of women and young people are in many cases severely restricted, and, in the occupations which involve contact with glazes or other materials containing lead, there is, for the first time, a definite restriction on the working hours of adult males.

In making an attempt to elucidate this complex code of Regulations for the benefit of employers, managers, and workpeople alike I have decided, after careful consideration and several tentative efforts, that the simplest plan is to deal with the subject process by process, from the moment when the raw materials are first handled until the finished articles are ready for despatch from the works. It is hoped that this method will give all who are concerned a clear idea of the regulations governing the work in each department, though it will be found to involve much repetition of certain regulations, or parts of regulations, especially as I have thought it advisable to print certain of these in three or four places, preferring that they should be read many times over rather than that they should be observed in two or three departments and their application elsewhere overlooked.

As an introduction to the spirit of the rules I wish to emphasise at the outset the fact that the exhaustive investigation, already referred to, has shown that the greatest injury to the health of the pottery worker arises from the breathing of dust, for, whether the material be the fine dust of flint or other hard mineral substances which tend to produce an undue amount of lung trouble among certain classes of pottery workers, or the more dangerous dusts which have a direct poisonous action because of the lead compounds they contain, all the evidence seems to prove that the only remedy is to be found in preventing this dust from being breathed by those who are employed in the various occupations of the factory.† Apart from the regulations that are now imposed in order to get rid of dust of all kinds, where it is created, in such a way that it cannot be diffused into the general air of the workshop, it must be obvious that any steps that can be taken to avoid or prevent the creation of dust are most desirable; hence the value of the regulations for the systematic cleaning of the floors of workshops and the injunctions laid on the workpeople to avoid, as far as possible, the unnecessary creation of dust by conducting their work in a careless or reckless fashion.

It is of the utmost importance that everyone concerned should realise the revolution that has taken place in medical opinion during the last ten years as to the exact way in which pottery workers who work with glazes or other materials containing lead are liable to absorb lead compounds into their system. Formerly the general medical opinion was that lead entered the system—

(*a*) By absorption through the skin; especially where, as in the case of the dipping of pottery, the hand and even the forearm have to be repeatedly plunged into a bath containing white lead, and other substances, in suspension in water.

(*b*) By absorption through the digestive tract; by carrying the dusty hands to the mouth, or by eating food with unwashed hands after work involving the handling of lead compounds.

(*c*) By absorption in the lungs; through breathing the finest particles of dust containing lead.

Belief in the first method, viz., "skin absorption," has been generally abandoned from the failure to find any evidence that such lead compounds as are used in pottery making can or do pass through the skin. The absorption in the stomach and digestive tract—only ten years ago deemed of such overwhelming importance that the use of lead in glazes was to be restricted to such frits as had a low solubility in dilute hydrochloric acid and therefore, presumably, in gastric juice—though still regarded as a fertile source of lead poisoning, is no longer thought to be the most important channel by which lead finds its way into the human system. The most important, because most dangerous, channel is now believed to be through the lung tissues by the absorption of the fine, almost invisible, particles of lead dust breathed in with the air.

This change of opinion as to the direct causation of the lead poisoning among pottery workers explains both why the regulations as to washing and cleanliness and the storage of food and the provision of mess-rooms have all been strengthened and extended, and at the same time great precautions have to be taken to avoid the production of dust from glaze, or colour, or its immediate removal at the point of origin so that it shall not be breathed by the worker.

Next in importance to the great group of questions that naturally arise in dealing with an industry that, in some of its branches, must use or produce dust, are the considerations connected with the efficient ventilation and the regulation of the temperature of workshops—a subject which is also beset with difficulties because of the great variety of processes to be found even on one and the same works, and the necessity there is in pottery manufacture for drying and firing the articles more than once, or even twice, at various stages of completion. Apart from the general question of the ventilation of the workrooms there is the still more difficult problem of the ventilation of potters' drying stoves of various kinds, and the reduction of the temperature of ovens, before drawing to the limit of 125° Fahr. This question of temperatures is likely to prove a thorny one as, although it may be possible to lay down some broad general principles which can be followed with advantage, the structural conditions of potters' stoves and ovens vary so widely that it may be said that each works will offer a special problem to those who have to deal with it.

Minor regulations, such as those governing the provision of mess-rooms, lavatories, cloak-rooms, storage places for food, &c., are also of importance; and as these regulations are devised quite as much for the comfort and convenience of the workpeople as for the protection of their health, it is to be hoped that the operatives will avail themselves of such provisions in the proper spirit and remove the reproach that has been often justly levelled at them of the neglect or misuse of lavatories, mess-rooms, and other conveniences.

The success of these Regulations in improving the health of pottery workers, as has often been pointed out with regard to previous codes, depends absolutely on the active and willing co-operation of all concerned—employers, managers, and workpeople alike—and it is to be devoutly hoped that a spirit of sympathetic understanding and an earnest desire to make the best that can be made of the working conditions of pottery factories will become general throughout the trade.

Regulations which apply to all Workrooms.

Ventilation.—Every place in which any worker or workers are employed shall be thoroughly ventilated. (Reg. 9 (*a*).) See pp. 564 and 566.

Fresh air shall, when practicable, be admitted to all workrooms by inlets placed along the sides of the room at a height of as nearly as possible 6 ft. above the floor level, hopper openings being used for the purpose wherever possible. (Reg. 9 (*e*).) See p. 566.

Where it is not practicable to provide such fresh air inlets arrangements shall be made for the entry of an adequate amount of pure air by a flue (duct), with apertures at intervals along its length, or other means which will secure an even distribution of the air throughout the room. (Reg. 9 (*f*).)

In no case shall fresh air inlets be so arranged that a draught can blow direct upon any worker. (Reg. 9 (*g*).)

Wherever the natural air currents are found to be insufficient without assistance to afford thorough ventilation, exhaust fans or other artificial means of creating a current of air shall be provided and maintained in use. (Reg. 9 (*h*).) See p. 568.

Where hopper openings can be provided they are usually the simplest means of providing a supply of fresh air without draught (see p. 566); but where the windows are sash windows a simple device will also enable them to be converted into ventilators. Raise the bottom sash, permanently, by fixing under it a block of wood 3 in. thick. It will be found that fresh air from outside will find its way into the room as indicated in the sectional diagram. (Fig. I.). Such an arrangement is often a useful contribution to the fresh air supply of a workshop.

Temperature.—Such a condition of air shall be maintained in *all* workrooms that the reading of the wet-bulb thermometer shall not exceed 70 deg. Fahr., except at such times as the reading of the wet-bulb thermometer in the shade in the open air exceeds 65 deg. Fahr. (Reg. 10 (*a*).) See p 567.

Wherever steam or hot water pipes pass through a workroom, they shall be efficiently protected, and if not used for the purpose of heating that room they shall be efficiently covered with non-conducting material. (Reg. 10 (*c*).)

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† On this question of dust as the principal enemy of the pottery worker see "The Hygiene of the Pottery Trade." W. Burton, Royal Society of Arts 1908.

Floors.—In *all* workrooms, except those for which specific regulations are laid down, the following Regulations shall apply :—All floors shall be maintained in such repair that they can be properly cleaned by a moist method (see p. 567), and shall be so cleaned daily. All ashes, dirt, or other débris, including any which have accumulated under benches, shall be carried out daily. (Reg. 12 (*f*).)

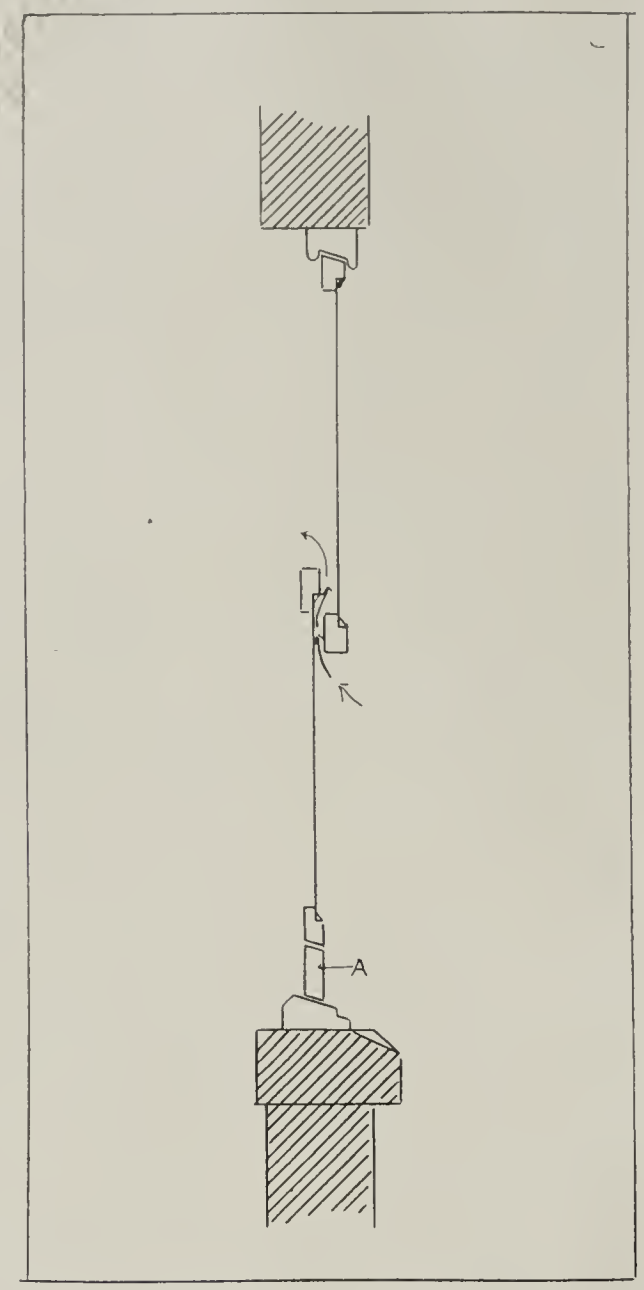


FIG. 1.—Ordinary Sash Window, with block of wood A, full width of window, inserted under bottom sash.

Samples for Analysis.—(Reg. 28.) (*a*) The occupier shall allow any of His Majesty's Inspectors of Factories to take at any time sufficient samples for analysis of any material in use or mixed for use. (*b*) Provided that the occupier may at the time when the samplo is taken, and on providing the necessary appliances, require the Inspector to take, seal, and deliver to him a duplicate sample. (*c*) But no analytical result shall be disclosed or published in any way except such as shall be necessary to establish a breach of these Regulations.

Numbering of Workshops.—There is no regulation requiring that workrooms shall be numbered, but after consideration the Joint Committee recommends :—That each workshop be numbered consecutively, such number to be painted or stencilled on the door. The Joint Committee is of opinion that such a numbering will facilitate the working of the Regulations and the work of H.M. Inspectors of Factories, as in the weekly reports to be kept by the management or in any correspondence it will be sufficient to designate the particular workroom by its number.

Structural Alterations.—The Joint Committee also recommends that when any structural alterations take place on a factory, and there is a possibility of any lead dust being disturbed and scattered into the air, each workman employed in this work should be required to wear a respirator during the progress of the alterations.

REGULATIONS FOR SPECIFIED EMPLOYMENTS.

1. MILL, FRIT KILN, AND LEAD HOUSE.—It is advisable to consider these departments together, because on many potteries their working overlaps, and the same workman may be employed, at times, in all three.

(*a*) *Mill.*—In cases where no unfritted lead compounds* are stored, handled or used, the only difficulty to be apprehended is from the handling of dusty substances like flint, stone, or bone. The dust often unnecessarily created by careless workmen in shovelling these about or in charging the pans or cylinders can be largely avoided by damping the materials.

When an unfritted lead compound of any kind is handled (i.e., weighed, shovelled or mixed), the worker must wear a respirator, unless the work is done in connection with an efficient exhaust draught. (Reg. 8 (*a* ii.).)

A good and efficient respirator consists of a large, damp potters' sponge, which can be worn over the mouth and nostrils, being held in position by a tape or elastic round the back of the head, for the short time taken in the work.

Whatever form of respirator is used, when more than one workman is compelled to use them, a separate respirator must be provided for each worker, and each respirator must bear the distinguishing mark of the worker. (Reg. 8 (*b*).) It is further necessary that such respirators shall be provided by the employer, and he is responsible for their maintenance in an efficient and cleanly state. (Reg. 8 (*b*).)

The mill floor is, almost of necessity, made of some hard and impervious material such as wood blocks, flag, vitrified tiles, or cement. Such flooring is advisable (though not prescribed) in all cases as permitting efficient cleaning, and in mills where glazes or colours containing unfritted lead compounds are ground a strong washable floor is essential.

Women and young persons are not as a rule employed in potters' mills, but their employment is prohibited in the weighing out, shovelling, or mixing of unfritted lead compounds in the preparation of frits, glazes or colours. This, of course, would prevent the employment of a male worker under 18 years of age in this process. (Reg. 1 (*a* ii.).)

The miller who handles unfritted lead compounds must be examined once in each calendar month by the *Surgeon*. (Reg. 2 (*a*).)

(*b*) *Frit Kiln and Frit Mixing Room.*—Whenever frits containing lead are prepared special precautions must be taken in mixing the materials and in conveying the charges into the kiln or into whatever receptacle they are melted in. The unfritted lead compounds used on a pottery should be purchased in a condition in which they contain 5 per cent. of added moisture, as they are only allowed to be handled in this condition of dampness. (Reg. 14 (*a*).)

They are also to be kept in their original packages until weighed out, and the cask or other receptacle containing them must be fitted with a cover or damp screen—a damp sack or a piece of damp press cloth will serve this purpose efficiently—so as to prevent the accidental issue of any dust into the air. (Reg. 14 (*b*).)

All workmen engaged in weighing out, shovelling, or mixing any unfritted lead compound in the preparation or manufacture of frits ; or in any other process carried on in a room where such frits are mixed, prepared, or conveyed to the kiln, must wear a respirator. (Reg. 8 (ii.).)

No respirator need be provided if the mixing, shovelling, or weighing takes place in such a way that an exhaust draught is maintained to carry off the dust at its point of origin. In the majority of cases it is unlikely that such a provision is possible—where the material is being conveyed into the kiln it is almost impossible—so that the provision and use of efficient respirators is of great importance.

It is most important that all handling of unfritted lead compounds in the state of powder should be conducted by as few workmen as are necessary ; that the rooms should be reserved only for such work, if possible, and that careful and intelligent supervision should be paid to the work at every stage.*

The employment of women and young persons (males under 18) is prohibited in the mixing, shovelling, or weighing of unfritted lead compounds. (Reg. 1 (*a* ii.).) The workmen employed in the preparing or fritting of frits or glazes containing lead must be examined once in each calendar month by the *Surgeon*. (Reg. 2 (*a* i.).)

(*c*) *Lead House.*—The name lead house is often indifferently applied to various rooms on different pottery works, but it would certainly cover any room or place in which : (*a*) Glazes containing lead are weighed out for the mill or the frit kiln and in which unfritted lead compounds are kept and weighed out, either for making glazes, colours, flow-powder, &c.† (*b*) Rooms or places in which tubs or jars of prepared glaze containing unfritted lead are kept, in which the glaze is stored until it is served out to dippers, glaze paintresses, and other workers who apply it to pottery ware.

It is highly desirable that unfritted lead compounds should be

* The term *unfritted lead compounds* includes, in all cases, white lead (whether carbonate or sulphate), red lead, and litharge.

* Where a large quantity of a lead frit is being prepared it is strongly recommended that such an amount of material should be mixed at one operation as will use, exactly, the contents of one or more casks of red lead. This saves much unnecessary handling of the red lead which takes place in such cases if it is weighed out in small lots at a time, and every rehandling of red lead, etc, should be avoided where possible.

† In this connection it must be borne in mind that sagger wash and the glaze for dipping the trial pieces used by firemen are included, if unfritted lead compounds enter into the mixtures.

stored or kept in as few places as possible on a factory, and then only under efficient oversight.

In all cases the floors of such workplaces *must* be :—

(*a*) Impervious floors of flag, blue brick, tile, concrete or similar material, or,

(*b*) Wooden floors with a thoroughly smooth and sound surface, constructed in such a substantial manner as to be free from permanont sag, and maintained in such repair that they can be properly cleaned by a moist method, and that no dust can fall through into rooms or passages below. (Reg. 12 (*b* i.).)

Where such rooms are on the ground floor it is *desirable* that the floors should be of the type (*a*) ; but in any case the floor must be a strong, durable one, and must be kept in a state of good repair. Where tubs of slop glaze are stored it is a wise precaution to tile the walls or to paint them with washable oil paint so that splashes of glaze can be easily washed away.

The floors, when the rooms are used during the day (*i.e.*, during any working period), shall be thoroughly cleaned daily, by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. the next morning. (Reg. 12 (*b* iii.).)

Work Benches.—The following Regulations shall apply to work benches in lead houses :—(*a*) Work benches, if not covered with sheet metal or constructed with an impervious surface, shall be strongly and solidly constructed of closely-jointed timber, and the surface of the work benches shall be well maintained. (*b*) All work benches in use shall be thoroughly cleaned daily by a moist method.

In every lead house, except such as are used for less than eight hours in any week, a special lavatory basin with a supply of hot and cold water, nail brush, soap and towel shall be provided and maintained ; and a solution of soluble sulphides shall be provided in which workers in the lead house shall rinse their hands after washing so as to show they are free from lead. (Reg. 14 (*c*).)

This solution of soluble sulphides may be made by the addition of two ounces of sodium sulphide to a bucket of water or some spent gas lime, from a gas works, may be stirred up in a bucket of water. The worker's hands if not properly cleansed from lead compounds by the washing will be blackened, when rinsed in such a mixture, so that a thorough scrubbing of the skin will follow.

Millers, men engaged in mixing or fritting lead frits and suchlike workers, are urged, for their own sakes, to use such a provision if possible.

Women and young persons (males under 18) are prohibited from weighing out, shovelling, or mixing of unfritted lead compounds in the preparation or manufacture of frits, glazes, or colours.

No woman, young person, or child shall be employed in the lawning of glaze, except where less than a quart of glaze is lawned at a time for the worker's own use.

No woman, young person, or child shall be employed in the preparation or weighing out of flow material. (Reg. 1 (*a* iv.).)

The preparation or weighing out of flow material which yields to dilute hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxido when determined in the manner described in the definition of low solubility glaze shall only be carried on within the range of an efficient exhaust draught.

The lawning of dry colours, except where not more than an ounce at a time is lawned for use in painting, shall only be carried on within the range of an efficient exhaust draught.

The workmen employed in the lead house must be examined once in each calendar month by the certifying *Surgeon*.

Preparation of Potters' Clay.

Slip House.—The general Regulations as to cleanliness, freedom from dust, and adequate ventilation will be found naturally in the great majority of slip houses, where the clays and other ingredients of the body are blunged, mixed, sieved, &c., so that the only Special Regulation laid down regarding them is Reg. 12 (*a*). The floors of all slip houses shall be kept thoroughly clean.

In some cases where it is the custom to store potters' scraps in the slip house until they can be again blunged into slip it will be advisable to reserve a definite corner, or to have a large box with a movable front, so as to obviate the risk of their being scattered and trampled about the floor.

Clay Press Shop.—No Special Regulations are applied to the processes usually carried on in such workshops. Cleanliness, of course, is essential as well as the maintenance of the floor in a sound and cleanly condition. Clay scraps must not be allowed to lie about and dry or get trampled under foot.

Conveying of Clay to Potters' Shops, &c. — No young person, or child (that is no one under 18 years of age) shall be employed in the carrying of clay without a certificate of permission to work specifying the maximum weight which the worker may carry. (Reg. 1 (*c*).)

This certificate must be given by the *Surgeon* when the worker commences such work.

No young worker may be allowed to carry a weight in excess of that stated in their certificate, and no certificate shall permit the carrying of more than 30 lbs. of clay by any worker under 16 years of age.

This prohibition is slightly modified in certain specified cases by a subsequent clause of the same regulation, viz. :—

No girl under 16 years of age, and no boy under 15 years of age, shall be allowed to carry clay, except that such a worker who is working for himself or herself, and is not an attendant on another worker, shall be allowed to carry such clay as is to be used by himself or herself in making articles of pottery. (Reg. 1 (*c* ii.).)

All young persons who require certificates of permission to carry clay must be examined by the *Surgeon* within seven days of the commencement of their employment in such work. (Reg. 2 (*b*).)

Further, all such young persons, until they attain the age of 18 years, must be re-examined by the surgeon *twice* in the first period of six months and once in each period of six months later, so long as they continue in this employment. (Reg. 2 (*c*) .)

At each such examination the *Surgeon* will have power to alter or amend the certificate, and after the worker is 16 years of age may increase the maximum weight that such worker is allowed to carry.

These regulations as to the carrying of clay from press-house or clay-cellar to potters' shops demand careful supervision on the part of the management and of the men who work in the clay press-house or clay-cellar.

Where clay is carried it is advisable to see that the passages, staircases, &c., along which it is carried be kept clean and free from pieces of clay, whether wet or dry.

For the conveyance of clay dust to mechanical presses for the manufacture of tiles or other articles, see *Dust Tile Shops*.

Wedging of Clay.—The wedging of clay is defined, officially, as meaning " The treatment of clay which has not been pugged or rolled, by raising one piece of clay by hand and bringing it down on another piece ; but does *not* include the process, frequently known as " slapping of clay," in which two pieces of clay, each small enough to be held in one hand, are knocked together.

Any subsequent beating, kneading, or working of clay which has been pugged or rolled is, therefore, not " wedging."

No young person, or child (that is, no one under 18 years of age), other than a male young person who wedges clay only for his own use, is allowed to wedge clay ; and no woman shall be so employed without a certificate of permission to work. (Reg. 1 (*b*).)

Which means that except such young male workers as wedge clay only for their own use in making articles of pottery, no one under 18 years of age may be employed in the process. Males over 18 years of age can be employed, but females over 18 years of age can only be employed when they have been examined by the *Surgeon*, and he has given them a certificate of fitness for such employment. A female over 18 years of age, " wedging " clay by certificate of the *Surgeon* apparently need not be presented for re-examination.

Clay Grinding.—Clay, whether natural clay or after mixture with other substances, is often ground in pans or disintegrators, &c., especially in the preparation of the bodies used in coarse ware factories, in the grinding of saggar marl, and in the preparation of clay-dust for making into tiles and other articles by pressure. Where such grinding is done with the materials in a *dry* condition the following important regulations must be observed :—

The dry grinding of materials for pottery bodies shall be done either with a sufficient exhaust draught for the removal of dust, or in machines so enclosed as to effectually prevent the escape of dust ; except that it shall not be deemed necessary in pursuance of this Regulation to provide an exhaust draught to remove small amounts of dust given off at the hopper of an enclosed machine in the course of feeding the same, if an outlet into an exhaust duct or to the outside air is fitted to the receptacle into which the powdered material is delivered. (Reg. 7 (*c*).)

Roller mills or pans (of the mortar mill type) if used for the dry grinding of clay, flint, or stone used in pottery bodies must, therefore, be provided with hoods from which there is an efficient exhaust draught. With disintegrators there are various methods in use for removing the dust, one or other of which will be applicable in all cases. The danger to be avoided is the diffusion of the dust of clay or other mineral substances into the air breathed by the workers.

Sifting of Clay Dust.—The sifting (sieving) of clay dust shall not be carried on without the use of an *efficient exhaust draught* except where : (*a*) This is done in a machine so enclosed as effectually to prevent the escape of dust ; or (*b*) The material to be sifted is so damp that no dust can be given off. (Reg. 7 (*a* ii.).)

This regulation is of great importance in those manufactories where clay dust is prepared for shaping tiles, electric fittings, &c., in mechanical presses.

It is obvious that the systematic sieving of dry ground flint, stone, or other hard, gritty material should not be carried on except with

these precautions ; there does not appear to be any definite stipulation of this process in the Regulations, but it is sufficiently covered by Reg. 7 (*m*).

Mould Making Shops.

The general provisions as to cleanliness, ventilation, &c., apply. In these workshops (Reg. 7 (*m*)) becomes important, viz., in all processes the occupier shall, as far as practicable, adopt efficient measures for the removal of dust and for the prevention of any injurious effects arising therefrom. This general provision is strengthened by a special provision.

In the process of mould making every bin or similar receptacle used for holding plaster of Paris shall be provided with an *efficient exhaust draught* so arranged as to prevent the escape of plaster of Paris dust into the air of the workplace ; except where a cover is provided for the bin or other receptacle, and the plaster of Paris is conveyed in a sack, the mouth of which is tied and only loosened when it is placed in the bin or other receptacle. (Reg. 7 (*b*).)

In the great majority of cases the provision of an exhaust draught will not be found necessary in mould-making shops, and it therefore becomes imperative to see that the alternative provision set forth in the second paragraph of (Reg. 7 (*b*)) above is fully observed. In my opinion this provision is quite sufficient in such cases, as whilst it is foolish and unnecessary to expose the worker to the inhalation of the dust of plaster of Paris or any other dust, there is no evidence that the inhalation of plaster of Paris dust in such small quantities is prejudicial to health.

Respirators.—No person shall be allowed to work in emptying sacks of plaster of Paris into a bin in a mould-making shop without wearing a suitable and efficient respirator, such as a damp sponge tied across the mouth and nostrils (Reg. 8 (*a* i.)) unless an *efficient exhaust draught* is provided to prevent the escape of dust into the workplace. See Fig. 4 on next page.

All such respirators must be provided and maintained in an efficient and cleanly state by the employer ; and each respirator must bear the distinguishing mark of the worker who has to use it. (Reg. 8 (*b*).)

Potters' Shops.

The term "Potters' Shops" covers rooms in which such a variety of processes is carried on that the Regulations for each kind of handicraft must be separately detailed, process by process ; it will, however, save much repetition if the general Regulations affecting *all* potters' shops equally are set forth here. The underlying idea of these voluminous and detailed Regulations is, of course, to render all the processes as healthy as possible by the avoidance of clay dust or, where such dust is necessarily or unavoidably created, to have such conditions as will save the worker from breathing it if he takes reasonable care. No regulations, however admirable in themselves, can prevent a careless or slovenly worker from being a source of injury to himself and often to his fellow-workers.

Every workroom in which any worker or workers are employed shall be thoroughly ventilated. (Reg. 9 (*a*).)

All workrooms in which articles are left to dry shall be ventilated in such a way as to ensure a continuous movement of the air in the room in the direction away from the workers and towards the articles in question. (Reg. 9 (*b*).)

Fresh air shall, where practicable, be admitted to all workrooms by inlets placed along the sides of the room at a height of as nearly as possible 6 ft. above the floor level, hopper openings* being used for the purpose wherever possible. (Reg. 9 (*e*).) Where it is not practicable to provide such fresh air inlets arrangements shall be made for the entry of an adequate amount of pure air by a flue with apertures at intervals along its length, or other means, which will secure an even distribution of air throughout the room. (Reg. 9 (*f*)).

In no case shall fresh air inlets be so arranged that a draught can blow direct from them on to any worker. (Reg. 9 (*g*).)

Wherever the natural air currents are found to be insufficient, without assistance, to afford thorough ventilation, exhaust fans or other artificial means of creating a current of air shall be provided and maintained in use. (Reg. 9 (*h*).)†

Wherever steam or hot water pipes pass through a workroom, they shall be sufficiently protected, and if not used for the purpose of heating the room, they shall be efficiently covered with non-conducting material. (Reg. 10 (*c*).)

Such a condition of atmosphere shall be maintained in all workrooms that the reading of the wet-bulb thermometer shall

* Hopper openings are of such general utility in the ventilation of all workrooms that a description is advisable. Windows with a hinged top opening inwards, or openings of any convenient size in the outer wall of a building, are readily made into hopper openings. In the case of the window, sidewings filled with glass should be provided, so that when the top sash is opened on its hinges it falls back on to rebates in these wings and so makes the hopper. In the case of holes made in the wall, where windows are absent, a hinged iron flap may be fitted to the opening, which when drawn back makes a hopper. These can be purchased from any builders' ironmonger or merchant. A constructional point of importance in such a hopper is that when the hopper is fully opened the top of the hopper should be higher than the level of the top of the fresh-air inlet. This can be easily contrived by putting a wooden cross-piece outside the opening, so as to narrow the air-stream at the inlet ; thus :—

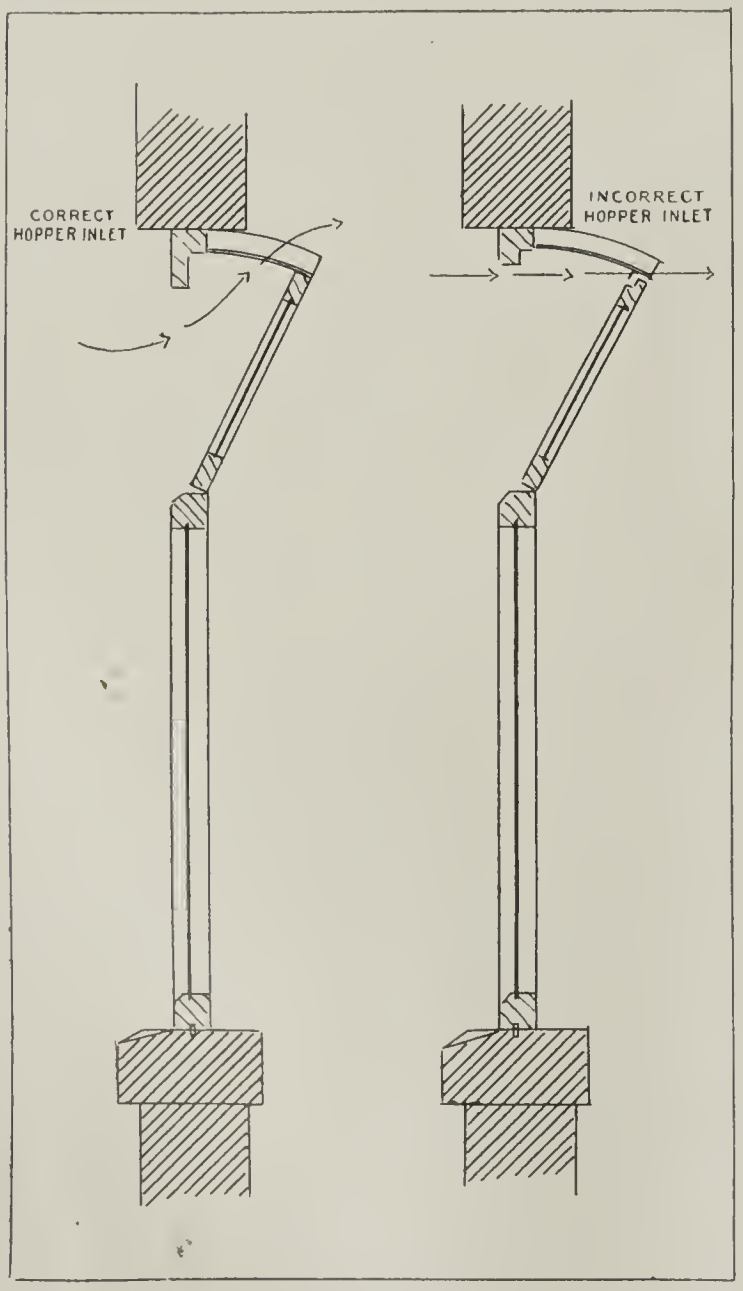


Fig. 2.

† Where natural means of ventilation, even by the use of hopper openings in the walls, louvred openings in the roof, and so on, are insufficient, it may often happen on a pottery works that the slight additional assistance to the air circulation required can be obtained by the proper use of a stove-pot, the printers' stove in printing shops, or ducts leading into the hovels of adjacent ovens or kilns, or other chimneys. A simple method of greatly increasing the efficiency of a stove pot as a means of ventilation is shown in the diagram below. Instead of running the ordinary pipe of 3 in. or 4 in. diameter up through the roof, let a wider zinc pipe,

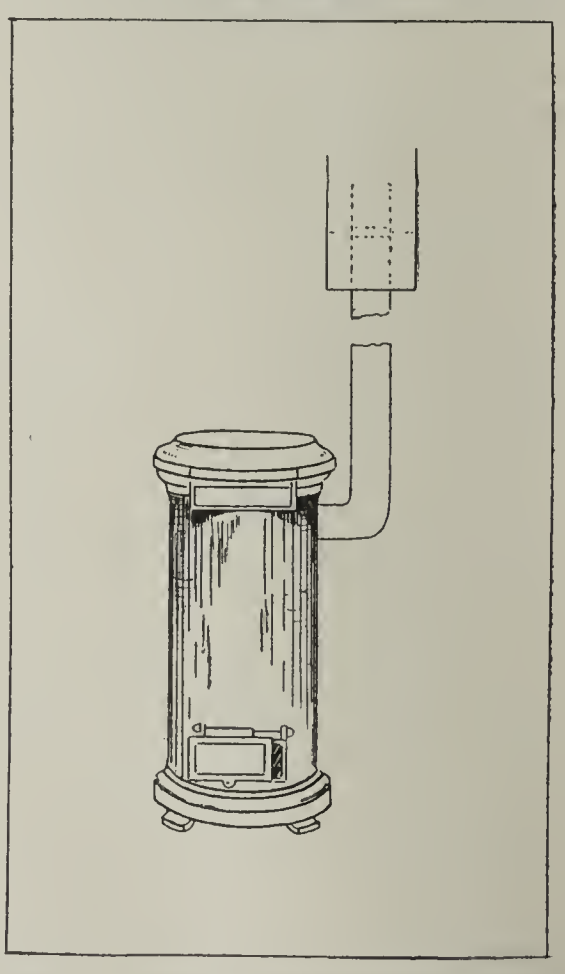


Fig. 3.—Stove Pot with Ventilating Shaft.

not exceed 70 deg. Fahr. except at such times as the reading of the wet bulb thermometer in the shade in the open air exceeds 65 deg. Fahr. (Reg. 10 (*b*).)

In fixing a maximum reading of a *wet-bulb* thermometer, and not of an ordinary thermometer, the governing idea is to obtain an indication of the condition of the atmosphere of the workroom as regards the amount of moisture it contains in relation to the temperature. Work in a dry atmosphere at a temperature well above 70 deg. Fahr. is not necessarily too fatiguing or enervating, but when such a reading is given by a wet-bulb thermometer it shews that the conditions of temperature and moisture of the atmosphere are such that the limit has been nearly reached at which continuous work can be healthily conducted. It is obvious that the reading of the wet-bulb instrument need only be considered at all those places in the room where people actually work, or in that vicinity. In the case of a potters' shop, where there are adjacent dobbins or stoves, it would be foolish and unnecessary to record the readings at the openings of the dobbins or stoves unless people are actually working there, or close thereby. Further, it must be pointed out that while the limit is applicable to *all* workrooms it is only necessary to *provide and maintain* wet-bulb thermometers in those workrooms which are specified in (Reg. 10 (*b*)) above. The proper ventilation of all drying stoves, dobbins, &c., which is expressly laid down in another Regulation, is the best means to adopt for maintaining satisfactory atmospheric conditions in potters' shops.

Floors.—In all potters' shops, including such drying stoves as are entered by the work people, there shall be provided and maintained :—(*a*) Either impervious floors ; (*b*) or wooden floors with a thoroughly sound smooth surface, constructed in such a substantial manner as to be free from permanent sag, and maintained in such repair that they can be properly cleaned by a moist method, and that no dust can fall through into the rooms below. (Reg. 12 (*b* i.).)

When floors of concrete, tile or similar material can be provided in potters' shops of any kind, such a course seems advisable as promoting cleanliness and freedom from dust in the atmosphere. In the case of many existing factories, and especially with workrooms on the first or second storey, where the floors are of wood, they will need considerable attention to bring them within the scope of section (*b*) of the above Regulation. The strength of the floors will need attention, and also the smoothness of the surface. In old shops where the existing floors are worn, it may be possible to lay down another set of good floor boards over the existing ones, with their lengths running in opposite directions to the existing boards. Where the beams supporting the present floors are strong enough for the extra weight, this method has great advantages if well carried out, as it effectually prevents dust falling into the rooms below, and makes the floor firmer and more rigid, so that the dust is not so easily sprung into the air by the vibration caused when people walk about. Compositions of cement, sawdust, &c., are now known which can be spread on to an existing wooden floor and worked to a smooth and level surface which endures well, and is readily cleansed. It is also possible that the treatment of existing wooden floors where they are in good general condition, but perhaps need planing level, by giving them a good coating of heavy petroleum residuals, will render them impermeable to water and will provide a readily cleansable surface.

The floors, when the rooms are in use, shall be thoroughly cleaned daily, by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. next morning. (Reg. 12 (*b* ii.).)

With regard to "cleaning by a moist method," which is rendered compulsory by the above Regulation, the sprinkling of the floors with a watering can before sweeping is one method, though not a very satisfactory one. The best method I have found for cleaning dusty floors is to liberally sprinkle the floor with wet sawdust, tea-leaves, or some similar substance which enables the clay dust to be swept up without filling the air with it. Treatment of wooden floors with petroleum residuals is very efficacious in this respect, but the treatment must be repeated at intervals.

Scraps of clay and other débris, including any which have collected under the benches, shall not be allowed to accumulate unduly, and all such scraps and débris shall be carried out at least once a day. Scraps of clay in potters' shops shall be damped before being carried out.

In all drying stoves which are entered by workpeople, boxes shall be provided for the reception of broken or waste clay ware. (Reg. 12 (*b* iii.).)

The provision of boxes for the reception of broken or waste clay-ware should prove of distinct advantage both to the workpeople and the employer. If the workpeople will acquire the habit of putting such scraps into the boxes, the dry clay will not be trodden under foot so that clay dust flies into the air, and the scrap clay will not be dirtied and wasted.

Work benches, if not covered with sheet metal or constructed with an impervious surface, shall be strongly and solidly constructed of closely jointed timber, and the surface of the work benches shall be well maintained. (Reg. 13 (*a*) .)

It is not always practicable—it may even be harmful to the ware—to cover potters' work benches with sheet metal such as zinc, but where it is possible to provide and use such benches in potters' shops the metal covering can be readily kept clean.

All work benches in use shall be thoroughly cleaned daily by a moist method. (Reg. 13 (*b*).)

While provision is made in the Regulations (see above) that the floors shall be moist-cleaned daily by an adult male worker appointed by the occupier, it is understood that the systematic daily moist-cleaning of work benches shall be carried out by the workers themselves, and in their own time as heretofore. I would suggest, therefore, that manufacturers should put up a notice in potters' shops "Each worker is hereby appointed to clean his own work bench."

In this connection, the following Regulations, which appear under Part II. of the Regulations, "Duties of Persons Employed," are of great importance.

The persons appointed by the occupiers shall clean the several floors, walls, work benches, appliances and other objects regularly, as prescribed in these Regulations. (Reg. 34.)

Every worker shall so conduct his or her work as to comply strictly with these Regulations, and to avoid, as far as practicable, making or scattering dust, or refuse, or causing accumulation of such (Reg. 36), and,

No person shall in any way interfere, without the knowledge and concurrence of the occupier or manager, with the means and appliances provided by the employers for ventilation, and for the removal of dust. (Reg. 32.)

Potters' Work Boards.—The boards used in dipping houses and in other work-places where lead processes are carried on, which boards must be marked by painting them red for six inches from each end, must never be used in the clay departments (i.e., potters' shops, &c.) under any circumstances. (Reg. 17 (*c*)), also (Reg. 35 (*c*.).)

The importance of a careful observation of this Regulation on the part of the workpeople as well as of the employer, is apparent, as every care must be taken to confine the appliances used in the lead departments of a pottery to those departments only.

Hours of Employment of Women, &c.—In potters' shops no woman or young person shall be employed for more than 9½ hours in any day, or for more than 6½ hours on Saturday. (Reg. 25 (*f*).)

Storage of Moulds.—Suitable provision shall be made for the storage of all moulds when not in use. In existing installations, the tops of drying stoves shall not be used for this purpose

say of 8 in. diameter, be run through the roof and terminated with a cover or cowl to prevent down draught. Let the free end of the stove pipe project about a foot or 18 in. into the bottom end of this, and the column of hot gases ascending from the stove-pot will drag a considerable volume of air from the room and through the annular space between the two pipes. In the same way, a hood may be put over a printers' stove at a height sufficient to enable the work to be freely carried on, and if this is narrowed into a pipe which goes up through the roof and is hooded at the exit, so much hot air is taken from the room that with a liberal supply of fresh air the temperature of the shop is sensibly reduced. (See Fig. 5.)

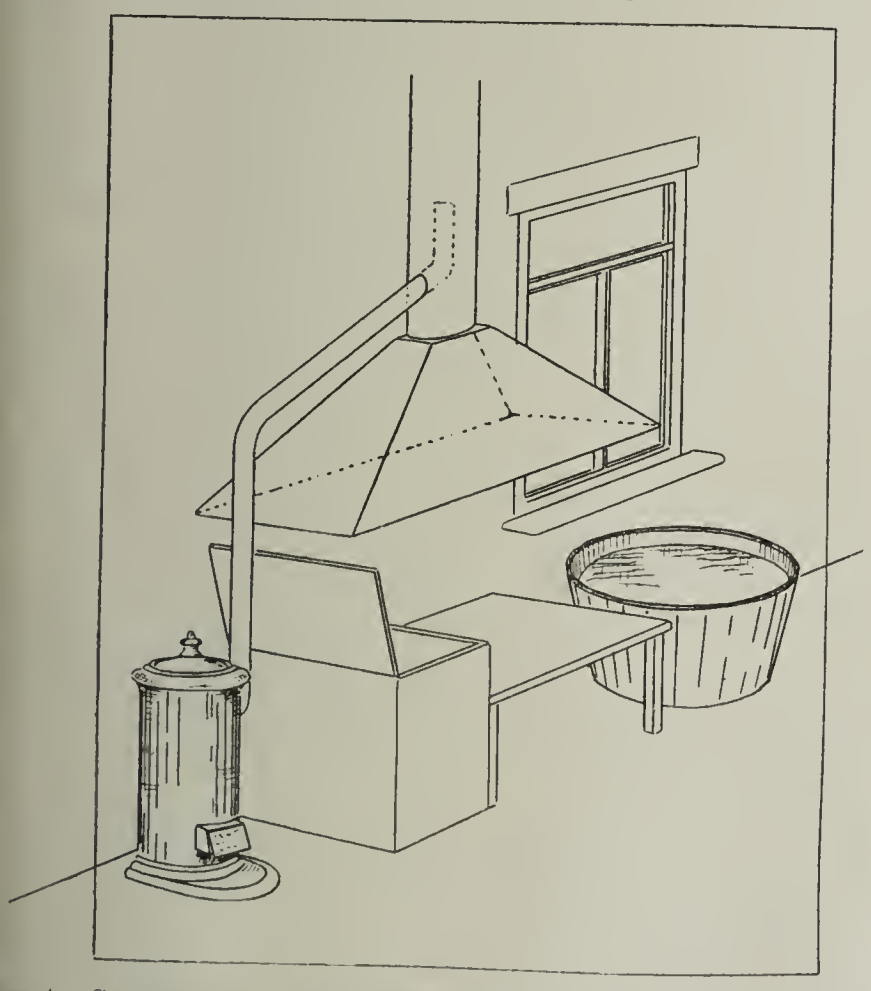


FIG. 4.—Stove and Ventilating Shaft and Hood over Plaster-of-Paris Blending Bench and Box.

unless it can be shown to the satisfaction of the Inspector of Factories for the district that no other suitable place is available. In any new erections, suitable provision shall be made without utilising the tops of stoves for this purpose, unless the top of the stove is made into a separate chamber. (Reg. 12 (*b* iv.).)

Affixing of Notices.—In every potters' shop there shall be kept constantly affixed a notice printed in bold type so that it can be easily read, setting forth those portions of the Regulations which apply to that particular workplace. (Reg. 26.)*

Potters' Shops Classified by Process.

Throwers and Turners.—In addition to he Regulations pertaining to all potters' shops, viz., those relating to Ventilation, Temperature, Construction and Cleaning of Floors and Work Benches, Storage and Removal of Scraps, Hours of Employment of Women and Young Persons, Clay Carrying and Wedging, which necessitate a careful perusal of the last section, there are two Special Regulations pertaining to the attendants on Throwers and Turners specially.

No female shall be employed for more than seven days as a wheel-turner for a thrower, without a *certificate of permission to work*. (Reg. 1. (*d*).)

The certificate of *permission to work* at this particular employment must be obtained from the *Surgeon*, at the expense of the employer. It is further provided that any female to whom such a certificate of permission to work has been granted by the *Surgeon* must be presented for re-examination at a later date, if the *Surgeon* considers it necessary. (Reg. 2 (*d*).)

It must be borne in mind that the fees for all medical examinations made in pursuance of these regulations shall be paid by the employer and shall not be charged to the worker whether he be in regular or casual employment. (Reg. 2 (*e*).)

Slip Decoration.—Decoration on unfired clayware by means of coloured clay slips shall not be regarded as colour blowing for the purposes of any of the Regulations applying especially to the latter process. (Reg. 22 (*d*).)

No girl under 16 years of age shall be employed as a lathe-treader. (Reg. 1 (*e*).)

All workrooms in which articles are left to dry shall be ventilated in such a way as to ensure a continuous movement of the air in the room in a diroction away from the workers and towards the articles in question. (Reg. 9 (*b*).)

This Regulation may give rise to some difficulty in Throwing and Turning rooms, where articles of clay are left to dry, and will generally demand a careful observance of the readings of a wet-bulb thermomoter near the actual working places of the throwers, turners, or others working in such rooms. This is the only method by which one can show that the fundamental spirit of the Regulation is being observed.

Flat-Pressers.—The flat-pressers' workshops on a pottery factory will need most careful attention as the Regulations applied to them are of a far-reaching character, especially where "towing" is carried on in them. Great care must be taken that all the Regulations set forth under Potters' Shops are fully carried out. Ventilation and temperature need most careful consideration. (Reg. 9 and 10, see pp. 566 and 567.)

The condition of the floors and work benches and their regular and systematic cleaning in the prescribed manner. (See p. 567.)

Careful supervision is necessary to see that the Regulations as to the carrying of clay, or other systematic carrying or lifting work, by young persons or children are carefully observed. (See p. 565.)

The collection of scraps of clay both in the workrooms and in the stoves adjoining and the provision of boxes or other receptacles for that purpose. (See p. 567.)

The Regulation governing the storage of moulds also applies and may give rise to some difficulties as the problem is not easy of solution in many cases. (See p. 567.)

Where, as in the majority of cases, articles are allowed to dry in these workshops, or in dobbins, or drying stoves adjoining the workrooms and heated artificially, a wet-bulb thermometer or thermometers must be suitably mounted and maintained in efficient condition in the workroom, and readings must be taken regularly and systematically to see that the readings are not higher than 70 deg. Fahr. (Reg. 10 (*a*) and (*b*).)

It has already been pointed out in this connection that the wet-bulb instrument should be suspended in the vicinity of those portions of the workroom where the workers are actually engaged, and not over or near the openings to stoves or dobbins, if these openings are reasonably removed from the workplaces in the room.

Towing or Sandpapering of Flat Ware.—The fettling of flat ware, whether china or earthenware, by towing or sandpapering, shall not be carried on without the use of an efficient exhaust draught. (Reg. 7 (*a* i.).)

But this provision of an exhaust draught "Shall not apply to the occasionally finishing of pieces of china or earthenware without the aid of mechanical power." (Reg. 7 (*a* i.).)

An exhaust draught must also be provided for the carrying on of any other process of fettling on a wheel driven by mechanical power, except where:—(*a*) The fettler is fettling, as an occasional operation, only ware of his or her own making; or (*b*) the fettling is done wholly with a wet sponge or other moist material; or (*c*) the fettling is done by the worker who has made the articles, whilst the latter are still in a moist state. (Reg. 7 (*a* iii.).) Reg. 7 (*m*) must always be borne in mind.

The provision of an exhaust draught for the process of fettling where a wheel driven by mechanical power is used, and the worker is engaged continuously or for the most part, becomes necessary whether the process is that of "towing," sandpapering, or any other method. It need not be provided for such "towing" or sandpapering as may be done *occasionally* in finishing pieces of china or earthenware, and where no mechanical power is used. Neither need an exhaust draught be provided for any other method of fettling in china or earthenware where the fettling is done with moist materials (sponge, &c.), or the worker is fettling the articles he has himself made before they are white dry, or where a potter is fettling only ware of his or her own making, when the major part of his working time is occupied in making, and the fettling is only done at intervals even though it be done on a wheel driven by mechanical power.

For the exhaust draught to be efficient it will almost certainly be necessary to take it from a hood surrounding the power driven wheel on which the flat ware is placed for "towing," sandpapering, or other fettling process. Many adequate forms of hood are already in use for "towing," so that no manufacturer should experience any difficulty in providing suitable hoods for all fettling purposes where they are required.

Reg. 7 (*n*) states that—Every process for which an exhaust draught is prescribed shall be carried on inside a hood or exhaust funnel; provided that, where the occupier can show that this is impracticable, it shall be sufficient if the work is done within the effective range of an exhaust opening.

In the Definitions affixed to the Official Regulations an Efficient Exhaust Draught is stated to mean "An exhaust draught which effectually removes, as near as possible to the point of origin, the dust generated in the process. No draught shall be deemed to be efficient which fails effectually to remove smoke generated at any point where dust originates in the process."

A simple means of obtaining sufficient smoke for testing the efficiency of exhaust draughts is to make some smoke-paper by soaking sheets of rough brown paper or of blotting paper in a solution of saltpetre. When these are dried they can be rolled up like a torch and when ignited will produce a cloud of smoke. Hold the smoking roll at the point of origin of the dust and if the smoke is effectually drawn away by the draught the latter is deemed to be efficient. All exhaust openings should be tested systematically in this way while the work is being carried on.

Where an exhaust draught is provided for the removal of dust generated in a manufacturing process, precautions shall be taken to prevent dust being drawn into the general atmosphere of the room from other sources of dust in places in the vicinity; communications with such places shall be stopped wherever possible, and the fresh air inlets hereinbefore mentioned shall be so arranged as to ensure that no extraneous dust is drawn towards the workers by the exhaust draught. (Reg. 9 (*k*).)

No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or remain during meal-times in any place in which the process of towing is carried on; or where any other process is conducted which the Inspector of Factories for the district shall certify as sufficiently dusty to render the room in which it is carried on an unsuitable place, in his opinion, for persons to remain during meal times. (Reg. 6 (*a*).)

Mess-room accommodation shall be provided for the workers who are excluded from their own workrooms during meal-times in pursuance of this Regulation. (Reg. 6 (*b*).)

For the mess-room provision that the employer is compelled to provide, refer to the Section dealing with Mess-rooms (p. 578).

Hours of Employment of Women and Young Persons.—Reg. 25 (*f*) states that in potters' shops, or in any place where "towing" is carried on, no woman or young person shall be employed for more than 9½ hours on any day, or for more than 6½ hours on a Saturday. While Reg. 25 (*g*) states that these shall be the maximum periods of actual work, exclusive of meal times. (See also p. 567.)

Hollow-Ware Pressing and Casting.—Care must be exercised on the part of the management to see that all the Regulations set forth under the heading of Potters' Shops are observed.

An efficient exhaust draught must be provided in connection with any process of fettling on a wheel driven by mechanical power, except where:—(*a*) The fettler is fettling, as an occasional operation, only ware of his or her own making; or (*b*) the fettling is done wholly with a wet sponge or other moist material;

* The special notices are being prepared by the Home Office, and manufacturers will be able to purchase copies from the King's Printers.

or (*c*) the fettling is done by the worker who has made the articles, whilst the latter are still in a moist state. (Reg. 7 (*a* iii.).)

Where an exhaust draught is provided for the removal of dust generated in a manufacturing process, precautions shall be taken to prevent dust being drawn into the general atmosphere of the room from other sources of dust in places in the vicinity; communication with such places shall be stopped wherever possible, and the fresh air inlets hereinbefore mentioned shall be so arranged as to ensure that no extraneous dust is drawn towards the workers by the exhaust draught. (Reg. 9 (*k*).)

Speaking generally, the workshops where Hollow-Ware Pressing or Casting are carried on are not dusty workshops, so that there should be no occasion, at all events in well-conducted factories, for any workers to be excluded from these workrooms during meal hours, or for the provision of exhaust ventilation.

The temperature requirements must, of course, be observed as in other workshops, and wet-bulb thermometers must be provided and maintained in those rooms in which ware is left to dry or where stoves, of any type, artificially heated, are in connection with the workrooms. (See pp. 566 and 567.)

The Regulation as to the storage of moulds is also important. (See p. 567.)

Reg. 25, Sections (*f*) and (*g*), regulating the hours of employment of women and young persons, must also be observed. (See p. 568.)

Sanitary Ware: Pressing and Casting.—The general Regulations for Potters' Shops, see pp. 566 and 567, and the regulation as to fettling given above (p. 568), will apply.

Regulation 7 (*a* ii.) states that "The sand-sticking of sanitary ware shall not be carried on without the use of an efficient exhaust draught."

It is further stipulated that "In the process of sand-sticking of sanitary ware, suitable provision shall be made for collecting any material which falls on the floor." (Reg. 7 (*d*).)

Where an exhaust draught is provided for the removal of dust generated in a manufacturing process, precautions shall be taken to prevent dust being drawn into the general atmosphere of the room from other sources of dust in places in the vicinity; communications with such places shall be stopped wherever possible, and the fresh air inlets hereinbefore mentioned shall be so arranged as to ensure that no extraneous dust is drawn towards the workers by the exhaust draught. (Reg. 9 (*k*).)

Another general Regulation that may cause some difficulty in practice in Sanitary Ware Making shops, where large articles are necessarily left to dry very gradually, is Regulation 9 (*b*), which says:—

"All workrooms in which articles are left to dry shall be ventilated in such a way as to ensure a continuous movement of the air in the room in a direction away from the workers and towards the articles in question."

It seems to me that the only fair way in which this Regulation can be dealt with is by ensuring that wet-bulb thermometer readings are carefully observed in the actual working places and their immediate vicinity in the room.

Mechanical Compression of Clay-Dust in the Manufacture of Tiles and Other Articles.—In the workrooms where such processes are carried on, whatever be the exact description of the articles or parts of articles manufactured the general regulations as to Potters' Shops set forth above (pp. 566 and 567), must be observed, as well as a considerable number of Special Regulations necessitated by the fact that the material handled and used is clay, of some kind or other, reduced to the condition of a powder or dust. The same regulations for temperature, floors, and their cleaning, &c., apply, but the provisions for ventilation and the prevention of clay dust becoming disseminated in the general air of the workshop are reinforced by stringent provisions as to exhaust ventilation.

An efficient exhaust draught shall be applied and maintained in:

The pressing of tiles from clay dust, an exhaust opening being connected with each press; this clause shall also apply to the pressing from clay dust articles other than tiles, unless the material is so damp that no dust is given off. (Reg. 7 (*a* v.).)

The fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on or with damp material; this clause shall also apply to the fettling of other articles made from clay dust, unless the material is so damp that no dust is given off. (Reg. 7 (*a* vi.).)

Every process for which an exhaust draught is prescribed shall be carried on inside a hood or exhaust funnel; provided that, where the occupier can show that this is impracticable, it shall be sufficient if the work is done within the effective range of an exhaust opening. (Reg. 7 (*n*).)

Where an exhaust draught is provided for the removal of dust generated in a manufacturing process, precautions shall be taken to prevent dust being drawn into the general atmosphere of the room from other sources of dust in places in the vicinity; communication with such places shall be stopped wherever possible, and the fresh air inlets hereinbefore mentioned shall be so arrangod as to ensure that no extraneous dust is drawn towards the workers by the exhaust draught. (Reg. 9 (*k*).)

In the process of making tiles from clay dust by pressure, supplies of material shall be conveyed to the work benches in such a manner as to disperse as little dust as possible into the air; clay dust shall not be carried into any press shop in sacks except where hoppers or similar receptacles are provided for receiving the clay dust, in which case a sack in sound repair shall be used and the mouth of the sack shall be tied and only loosened after it has been placed in the hopper or other receptacle which shall be provided with a cover. This clause shall also apply to the making from clay dust of articles other than tiles, unless the material is so damp that no dust is given off. (Reg. 7 (*e*).)

The problem of the dust exhaust from pressing and fettling benches in the manufacture of tiles and other articles from clay-dust bristles with difficulties and cannot be discussed here, but I have offered to show the apparatus and methods in use at the works of Pilkington's Tile and Pottery Co., Ltd., to other manufacturers who have the same difficulties, and many have already availed themselves of that offer.

A point of the utmost importance in all workrooms where the articles are made by the mechanical compression of clay-dust is the provision of an adequate supply of fresh air to the rooms, introduced preferably by hopper openings or otherwise, well above the heads of the workers. This is not only necessary to replace the air exhausted but such a circulation of the air of a workroom, in a general direction from above downwards, will tend to keep any dust that is accidentally spilt from reaching the breathing level.

The grinding and sifting of the clay in the preparation of the dust used in the making of tiles and other articles has already been described (p. 565).

No person shall be allowed to keep, prepare, or partake of any food, drink, or tobacco, or to remain during meal times in any place in which the process of tile making by the compression of dust is carried on. (Reg. 6 (*a*).)

Mess-rooms shall be provided for the workers employed in all such workshops. (Reg. 6 (*b*).)

For particulars of what this mess-room accommodation must be, see p. 579.

The Regulation as to clay carrying, p. 565 (Reg. 1 (*c*)), will, of course, apply to the carrying of clay-dust.

The Regulation as to systematic lifting or carrying work, p. 565 (Reg. 1 (*c*)), will need careful enforcement on the part of the management in rooms where articles are pressed from clay dust, as well as in shops where the making of stilts, thimbles, &c., is carried on.

Another Regulation of extreme importance in workrooms of this class is Regulation 1 (*m*):—

"No female shall carry a sagger full of ware; but

(*a*) The moving of such a sagger from one part of a bench to a contiguous part of the same bench on the same level; or

(*b*) The moving of such a sagger by any two females from a bench to the nearest convenient floor space in the same workroom if no saggers so moved are piled to a greater height than 4 feet,

shall not be deemed to be a contravention of this requirement."

The Regulation governing the daily systematic cleaning by a moist method of the floors of potters' shops is of great importance in these workrooms in particular, as the floors are almost certain to be covered with dust at the end of each day's work.

The floors, when the rooms are in use, shall be thoroughly cleaned daily, by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. next morning. (Reg. 12 (*b* ii.).)

Work-boards are so much in demand in tile-press shops that it will not be out of place to repeat here the warning against allowing the work-boards used in the lead departments of a factory to be carried into these workrooms. Regulation 17 (*c*) says:—

"Boards used in any lead process in a factory shall be clearly marked by painting them red, for at least 6 inches from each end, on both sides. Boards so used shall not be used in the clay departments under any circumstances."

The Regulations as to the hours of employment of women and young persons in potters' shops (Reg. 25 (*f*) and (*g*)) must, of course, be carefully observed in these shops. See p. 568.

Finally, it may be pointed out that the workpeople as well as the management, are charged with the duty of observing these regulations as to work-boards, the cleaning of workplaces and the introduction of food into such workrooms or remaining in them during meal times. (Regulations 31, 34 and 35.)

The attention of the workpeople should be specially drawn to the two following Regulations:—

Every worker shall so conduct his or her work as to comply strictly with these Regulations, and to avoid, as far as practicable, making or scattering dust, or refuse, or causing accumulation of such. (Reg. 36.)

No worker shall in any way, interfere, without the knowledge and concurrence of the manager or occupier, with the means and appliances provided by the employers for ventilation, and for the removal of dust. (Reg. 32.)

Plastic Tile and Faïence Making.—The regulations for Potters' Shops (pp. 566 and 567) must be carefully studied, as well as those detailed on p. 568 for Hollow-Ware Pressing and Casting and Sanitary Ware Pressing and Casting as the processes and methods are practically identical.

The Making of Electric Fittings and Sundries.—The regulations for Potters' Shops, pp. 566 and 567, must be carefully studied, as well as those detailed under the headings of Throwing and Turning, Hollow-Ware Pressing, and Dust-Tile Making in so far as similar processes are carried on.

The Making of Saggers, Crucibles, &c.—These processes generally resemble the processes used in the manufacture of coarse ware, but the regulations requiring special attention are those dealing with Ventilation, Temperature and Moisture of the air, and the employment of youths under 18 in any work involving systematic lifting or carrying.

With regard to the floors of these workrooms, it must be noted that Regulation 12 (*g*) states :—

> "The daily cleaning of floors by a moist method shall not apply to places where saggers, retorts, or crucibles are made."

Drying Stoves for Clay Ware.

Drying stoves are arranged and worked in various ways, and at very varying temperatures according to the class of pottery manufactured. Some, like the various types of dobbin or revolving drying stoves, revolve in an enclosed space heated by steam pipes or hot air, and are not entered by the workpeople. Others are enclosed rooms, heated by steam pipes, stove-pots, or in other ways, into which the worker enters from time to time to place the clay ware on the racks or to move it to cooler or hotter parts of the stove as may be required. There can, of course, be no regulation as to the temperature in the stove itself where the stoves are not work rooms ; the occasional and intermittent entry of workers for the purposes above described does not convert them into workrooms, but the ventilation of all stoves must be so arranged that the temperature o the workshops into which they open is not raised above the permitted maximum of 70 deg. Fahr. on a wet-bulb thermometer. For this reason the following regulations apply to all drying stoves, whatever the type :—

> All drying stoves shall be ventilated direct to the outside air by shafts having upward inclinations and terminating vertically or by louvres in the roof, or by other efficient means. (Reg. 9 (*c*).)

This regulation for the ventilation, even where necessary by exhaust draught, of potters' drying stoves, is of importance for the economical working of the plant as well as for the comfort of the workpeople. A closed stove or one in which there is an inadequate flow of air provides a very ineffective method of drying, and every means should be taken to ensure a continuous flow of air from the workroom *over the articles to be dried*, and so to the air exits. The rapidity with which clay articles can be dried varies greatly according to the clay material and the shape and size of the articles ; but this general proposition is true in every case. Provided there is a free removal of the moist hot air from the stove, whether by the ventilating shafts or louvres mentioned in the above Regulation, or by the aid of an exhaust draught, by which the hot moist air that has done its work is taken from suitable openings in the roof of the stove, it is generally advisable to leave a number of openings at fairly regular intervals in the walls of the stoves just above the floor level. Fresh air is thus drawn from the workrooms, and, entering near the steam pipes, is rapidly heated and rises upwards circulating among the articles placed on racks on its way to the exits, and it is on the arrangement and maintenance of these air currents that economical drying depends. A simple and practical device for increasing the value of a stove-pot when used in a drying stove is explained on p. 566 (Fig. 3). With dobbins or other forms of mechanical stoves attention to the fresh air inlet currents is also of importance almost equally with the removal of the hot air that has become saturated with moisture and is no longer of any use for drying.

Another regulation affecting potters' stoves is as follows :—

> In any new erection where steam pipes are used for heating a drying stove or any place where articles are left to dry, the pipes shall, if possible, be fixed in the form of a rack of horizontal pipes in a vertical plane.* Where this is impossible the pipes shall be fixed in such a position as to allow a thorough cleaning under and around them. In existing installations, if it is impracticable to comply with the preceding paragraph, the steam pipes shall be enclosed in a box in such a manner as to permit of the thorough cleaning of all parts of the box on which persons may walk or stand, and adequate measures shall be taken to prevent dust escaping from the box. Slides, drawers, trap-doors or other contrivances shall be provided wherever necessary to facilitate cleaning under pipes. All stillages shall be so arranged as to allow the floor to be thoroughly cleaned underneath them. (Reg. 12 (*e*).)

This Regulation for enclosing the steam pipes in a box will present many and serious difficulties with existing installations. Where the stoves are on the ground floor, which will be in a minority of cases, it will probably be best to excavate the ground beneath them, and then put a good strong kerb of tiles, cement or stone along the outer edge and above the floor level. A perforated iron grating with large and numerous holes can then be arranged above the pipes and level with the top of this kerb, so that any broken ware falling down will either find its way through these holes, or may be removed to the scrap boxes, which have to be provided in all such stoves. As an alternative the front edge of the pipe bed may be boxed in, and a perforated grating laid along the top of the pipes—side doors being left in the box for raking out the broken clay that finds its way down below the pipes.

Where the drying stoves are on upper floors, as is often the case, a continuous trough or troughs might be arranged beneath the beds of steam pipes, and under the ceiling of the room below. The fragments could be removed from these troughs, through well fitting trap doors, by the cleaners appointed to clean the workrooms after work in the rooms has ceased for the day. In the great majority of cases this particular cleaning need only be done at much longer intervals than a day, for so long as the dried clay is not in a place where it can be trampled upon and so disseminate dust in the air, it is out of harm's way, and the less frequently it is disturbed the better. In any case the management must exercise care to see that the fragments of clay are not left where they can be trampled on, or where dust can be sprung into the air, and also that the steam pipes are not buried in accumulated fragments of clay and dust.

It is further laid down, as incidentally mentioned above, that :—

> In all drying stoves which are entered by workpeople, boxes shall be provided for the reception of broken or waste clay ware. (Reg. 12 (*b* iii.).)

It is expressly laid down, that all such scraps and all ashes, dirt, and other débris should be carried out from the potters' stoves daily, and it is desirable that the prescribed daily cleaning of the floors should be done at the same time as the cleaning of the floors of the adjoining potters' workrooms.

The Green Room.—In many factories, especially those in which fine china and earthenware are made, some of the ware after it leaves the potters' shops is taken to what is known as "the Green Room" to be scrutinised and touched-up before it is sent to the ovens. Such shops are generally clean, bright, well-lighted shops maintained at an equable, not high, temperature, and technically it would be a misnomer to speak of them as drying stoves, though it would be equally impossible to declare that the ware does not become drier there. The general regulations as to ventilation, maintenance and cleaning of floors and work benches must be observed, while Reg. 10, Sections (*a*), (*b*) and (*c*), set out below are the only ones that seem to call for special emphasis.

> Such a condition of the atmosphere shall be maintained in all workrooms that the reading of the wet-bulb thermometer shall not exceed 70 deg. Fahr., except at such times as the reading of the wet-bulb thermometer in the shade in the open air exceeds 65 deg. Fahr. (Reg. 10 (*a*).)
>
> A thermometer, suitably mounted for observing the wet-bulb reading, shall be provided in every workroom in which any articles are allowed to dry, or in connection with which artificial heat is used in aid of the manufacturing process, whether in the workroom itself or in drying stoves or mangles or other appliances adjoining the workroom. (Reg. 10 (*b*).)
>
> Wherever steam or hot water pipes pass through a workroom, they shall be efficiently protected, and if not used for the purpose of heating that room, they shall be efficiently covered with non-conducting material. (Reg. 10 (*c*).)

Biscuit Placing.

(*a*) *Earthenware and General.*—Biscuit placing shops are generally sufficiently ventilated owing to the proximity of the ovens, and the processes used in the placing of earthenware ought not to be either dusty or uncleanly. With regard to the floors of biscuit placing shops the following regulation is imposed :—

> The floor of all biscuit placing shops shall be impervious, even floors of brick, flag or similar hard material, and shall be kept in good repair ; they shall be thoroughly sprinkled and swept by an adult male whenever the work of setting in an oven has ceased, and under any circumstances at least once a day. (Reg. 12 (*c*).)

It may be advisable also to repeat here Regulations governing the employment of females who are employed in packing or placing small articles of clay ware in saggers, a Regulation which is equally applicable whether the work is done in the biscuit placing shop, in the potters' shop where the articles are made, or elsewhere.

> (1) No female shall carry a sagger full of ware ; but the moving of such a sagger from one part of a bench to a contiguous part of the same bench on the same level ; or (2) the moving of such a sagger by any two females from a bench to the nearest convenient floor space in the same room if no saggers so moved are piled to a greater height than 4 ft., shall not be deemed to be a contravention of this requirement. (Reg. 1 (*m*).)

* I cannot but think that the regulation here laid down is a mistake, from the point of view of drying, however advantageous it may be for the avoidance of dust, and as affording a readier method of cleaning the floors.

(*b*) *China or other Wares with which Powdered Flint is used as a Placing Material.*—In addition to all the Regulations which apply to the process of biscuit placing of earthenware (see above), other regulations must receive careful attention here because of the dangers attendant on the use of dry powdered flint.

After one year from the date on which those Regulations came into force,* biscuit *flat* ware, which has been bedded for firing shall not be removed from the saggers after firing, except at a bench fitted with an efficient exhaust appliance for the removal of dust. (Reg. 7 (*f*).)

Flat-knocking and fired-flint sifting shall be carried on only in closed receptacles, which shall be connected with an efficient exhaust draught unless so contrived as to prevent effectually the escape of dust. (Reg. 7 (*g*).)

"*Bedding*" is defined, officially, to mean: "The placing of flat ware in powdered flint for the biscuit firing when the sagger or box containing the ware is filled up with powdered flint." "*Flinting*" is defined, officially, to mean: "The placing of flat ware in powdered flint for the biscuit firing, when the sagger or box containing the ware is *not* filled up with powdered flint."

Oven Drawing.

The drawing of pottery ovens is a laborious occupation, and the men engaged in it, when it is their turn to draw the tops of the piles of saggers, must work in a dry atmosphere at a comparatively high temperature. Regulations have, therefore, been enforced which will impose on the management the duty of paying attention to the efficient cooling of the ovens when the firing is finished. I would strongly urge on all manufacturers the importance of using every means in their power to cool their ovens as rapidly as their method of working will permit. The use of back clammings where the construction of the oven allows of their introduction; cooling dampers, which may be used with all ovens; or, where other methods fail, the extraction of the hot air from the top of the oven or the blowing of cold air into the oven may become necessary, always, of course, if the ware that is being cooled does not suffer, because the cooling is conducted too rapidly. No one can dogmatise as to what particular method should be adopted, but the question is of such importance as to demand the most careful investigation on those factories where the number of ovens is limited by considerations of space and where the trouble of hot ovens is, therefore, to be expected.

The following regulations shall apply to the drawing of ovens: (Reg. 10 (*d*).)

(1) The temperature, whether taken at the bottom of the stage, where the top drawer stands, or at any lower stage where men are working, shall not exceed 125 deg. Fahr. at any time when men are working in the oven.

(2) Except that in the case of any oven in which: (*a*) Cooling dampers are in use, and in respect of which (*b*) there has been no unnecessary delay in setting in the oven, it shall be permissible, on the joint agreement of employer and employed, to suspend the above rule not more than four times in any period of twelve months; but such suspension of the rule shall be conditional on immediate notice being sent to the Inspector of Factories for the district, stating the name or number of the oven which is being drawn at a temperature of over 125 deg. Fahr., taken as above. For the purpose of this exception, every oven to which it applies shall be given a distinctive name or number, which shall be recorded in the register. Particulars of any notice sent to the Inspector of Factories for the district in pursuance of this exception shall also be recorded in the register.†

(3) When notice is given by the oven-men, whether verbally to the manager or occupier, or by handing in a written notice at the office before 5.30 p.m. to the effect that the oven-men wish to have the temperature tested before the oven is drawn next day, arrangements shall be made for a responsible representative of the occupier to be present for the purpose at the time when the drawing in question commences.

(4) The temperature of ovens shall also be taken, on a demand being made by the oven-men, at any time when they are engaged in drawing. (Reg. 10 (*d*).)

Biscuit Sorting and Finishing.

(*a*) *Earthenware and General.*—The general regulations as to ventilation, efficient lighting, soundness of floors, temperature, &c., must all be observed, and, in addition the following special regulations apply:—

The brushing of earthenware biscuit shall not be carried on without the use of an *efficient exhaust draught*,‡ unless the process is carried on in a room provided with efficient general *mechanical* ventilation or other ventilation which is certified by the Inspector of Factories for the district as adequate, having regard to all the circumstances of the case. (Reg. 7 (*a* viii.).)

The object of this regulation is to prevent the fine particles of sand, &c., which sometimes stick to the biscuit ware when it is emptied from the saggers after firing, becoming scattered into the air at the breathing level, or above, by the brushing. Here again it is impossible to say where it may be held that the process is so dusty that the provision of special exhaust draught vents, within the efficient range of which the brushing must be done, becomes imperative. In the great majority of cases I am convinced that where mechanical or other general ventilation is efficiently applied it will be entirely adequate for the purpose. What I consider advisable is that where general mechanical or other ventilation is used, an ample supply of fresh air should be admitted at a height of six or seven feet above the floor level, by hopper openings, or through a large duct passing right across the workroom, and opening outside the walls at both ends if possible. Fresh air can then be supplied at intervals along the room, and if delivered through hopper openings direct draught is avoided. If in such a room there be provided, just above the floor level, similar ducts with openings at intervals, and exhaust takes place through these either by the use of a fan or by connecting them with a chimney or other suitable upcast creating a regular draught, a circulation of air will be established which will almost entirely prevent the dust, such as it is, from reaching the breathing level.

Further regulations which may apply here or in biscuit warehouses or even in potters' shops, are:—

No woman, young person, or child shall be employed in the following process:—

Stopping of biscuit ware with a material that yields to hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide, when determined in the manner described in the definition of low solubility glaze. (Reg. 1 (*a* i).)

"Stopping of biscuit ware" is officially defined to mean: "The filling up of cracks in ware which has been fired once and before glaze is applied to it."

The stopping of biscuit ware with a material containing lead shall not be deemed to be a scheduled lead process. (Schedule.)

(*b*) *China and other Wares placed with Powdered Flint.*—In the case of china or other ware that is placed with powdered flint for the biscuit fire quite different processes are required for preparing the biscuit ware to receive the glaze, not only because of the fine flint powder, but because this is often firmly adherent to the ware and needs to be scoured off. The invention of the "rumbler" and other types of enclosed machine by which the actual scouring process may be conducted, so that the worker need not be exposed to the risk of breathing fine flint dust has materially altered the work of the scourers. The present regulation, therefore, reads:—

The scouring of biscuit ware which has been fired in powdered flint* shall not be carried on without the use of an *efficient exhaust draught*, except where the scouring is done in machines so enclosed as effectually to prevent the escape of dust. (Reg. 7 (*a* ix.).)

Sometimes after the ware has been scoured it may require freeing from dust; this is carried out by hand brushing or by batting the ware with a paper flail. In such cases the following Regulation will apply:—

Fine Brushing or Batting of biscuit ware which has been fired in powdered flint shall not be carried on without the use of an efficient exhaust draught. (Regs. 7 (*a*) and 7 (*a* x.).)

For the definition of an *efficient exhaust draught* see p. 568.

Further Regulations of importance relate to the age of workers in these processes.

No person under 15 years of age shall be employed in any process included in Part II. of the Schedule. (Reg. 1 (*b*).)

Part II. of the Schedule reads:—

(*r*) Scouring of biscuit ware which has been fired in powdered flint.

(*s*) Emptying of biscuit ware which has been fired in powdered flint, from the baskets or other receptacles in which it has been conveyed to the biscuit warehouse or scouring shop.

Other important Regulations governing employment in this work follow, viz.:—

All persons employed in any processes included in Part II. of the Schedule (see above) shall be examined once in every twelve months by the *Surgeon*. (Reg. 2 (*b*).)

All fees for medical examinations made in pursuance of these Regulations shall be paid by the employer and shall not be charged to the worker, whether he be in regular or casual employment. Provided that casual workers examined at the Surgeon's surgery shall pay a fee of 1s. for each certificate entered in the portable register (carried by the worker); this fee shall be refunded by the occupier who first employs the worker after such examination; and the occupier shall record in the portable register the fact that the fee has been refunded. (Reg. 2 (*e*).)

A notice shall be fixed in a prominent place in the factory, showing clearly the time appointed for the *Surgeon's* periodical

* The regulations were technically in force from January 2, 1913, but the printed forms, registers, &c., were not issued to manufacturers until April, 1913.

† A special page will be provided in the Factory Registers for this purpose.

‡ For the definition of an *efficient exhaust draught* see p. 568.

* It is important to note in this section that the regulations apply to *any* biscuit ware that has been fired in powdered flint

visit; and an amending notice shall be affixed forthwith if it is found necessary to alter the date or hour; wherever possible, not less than three days' notice of an alteration of a date shall be given. (Reg. 2 (*f*).)

A private room shall be provided for all medical examinations. No one shall be present except such other medical man as the *Surgeon* may with the worker's consent admit; and, in addition, in the case of a female, any one female relative may be present or alternatively any one workwoman in the factory approved by the worker and the *Surgeon*. (Reg. 2 (*g*).)

No person after suspension shall be allowed to work in any process in which examination by the *Surgeon* is required by these Regulations, without a certificate of permission to work. (Reg. 2 (*h*).)

Health, &c., Registers.—See Section. "Registers" p. 580.

Hours of Employment.—No person shall be employed for more than 5 hours without an interval of at least half an hour for a meal. No male under 18 and no female shall be employed in actual work, exclusive of meal times, for more than 9½ hours in any day or for more than 6½ hours on a Saturday.

Overalls and Head Coverings.—The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in (*a*) The scouring of biscuit ware that has been fired in powdered flint. (*b*) Emptying of biscuit ware which has been fired in powdered flint, from the baskets or other receptacles in which it has been conveyed to the biscuit warehouse or scouring shop. (Reg. 4 (*a*).)

Head coverings shall be adequate to protect the hair from dust, and shall be worn in such a manner as to be effective for this purpose. (Reg. 4 (*b*).)

No person shall be allowed to work in the above-named processes without wearing the above-mentioned overalls and head coverings. (Reg. 4 (*d*).)

All such overalls or parts of overalls and all head coverings shall be washed or renewed once a week; and the occupier shall provide for washing, renewal, and necessary repairs of all overalls and head coverings to be done either at the factory or at a laundry; and no worker shall be allowed to take home any overalls, head coverings, or aprons provided in pursuance of these Regulations.

All overalls, head coverings, and aprons provided in pursuance of these Regulations, when not in use or being washed or repaired, shall be kept in proper custody; for this purpose there shall be provided a cupboard or cupboards or room or rooms suitably situated and sufficiently large to hold the overalls, head coverings, and aprons; a separate peg shall be provided for each worker who is required by these Regulations to wear overalls. (Reg. 4 (*f*).)

For all persons who are required by these Regulations to wear overalls a cupboard or cupboards or room or rooms shall be provided for the workers to deposit clothing put off during working hours; the accommodation provided for this purpose shall be sufficient to hold the outdoor clothing of all such workers, and a separate peg shall be provided for each such worker; all such cupboards or rooms shall be entirely separated from any source of lead or other dust, and from any place provided for the keeping of overalls, head coverings or aprons, and shall be kept thoroughly clean by the occupier. (Reg. 5 (*a*).)

The occupier shall make adequate provision for drying such outdoor clothing, if wet, during the time it is put off in working hours; this provision shall not be made in any place where there is any source of lead or other dust, or in any place provided for the keeping of overalls, head coverings or aprons, or in any messroom provided in pursuance of these Regulations, unless such provision consists of cupboards arranged against the wall and ventilated directly to the outside air, in which case the space occupied by such cupboards shall not be deemed to be part of the messroom accommodation, and the provision shall be subject to the approval of the Inspector of Factories for the district. (Reg. 5 (*b*).)

No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during meal times in any place in which china scouring or china biscuit emptying is carried on. (Reg. 6 (*a*).)

Messroom accommodation shall be provided for the workers employed in the above-mentioned processes. (Reg. 6 (*b*).)

For particulars as to the messroom accommodation required, see the section dealing with Messrooms (p. 579).

Lavatory accommodation must also be provided. (See p. 578.)

In addition, all the Special Regulations dealing with ventilation, the condition and cleansing of floors, temperature, systematic lifting and weight carrying, the carrying of saggers of ware by women, &c., must also be diligently observed. With regard to the cleaning of floors in the rooms where the scouring or emptying of biscuit ware which has been fired in powdered flint are carried on attention must be paid to the Regulation that:—

> No woman, young person, or child shall be employed in cleaning, as prescribed in Regulation 12, of the floors of such workrooms. (Reg. 1 (*a* v.).)

Biscuit Warehouse.

The biscuit warehouse where biscuit ware is stored after it has been sorted, brushed, scoured, or what not, until it is required for subsequent operations, needs attention as to ventilation, the condition and cleaning of floors, &c., and, in addition, as one or two operations may casually be performed there it would be well to mention them.

No woman, young person, or child shall be employed in the following processes:—

> Stopping of biscuit ware with a material which leads to dilute hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described in the definition of low solubility glaze. (Reg. 1 (*a* l.).)

The stopping of biscuit ware with a material containing lead is not a scheduled lead process. (See Schedule, Part I.)

The Joint Committee, after careful consideration of the question, is of opinion that the carrying on of papering, wrapping, selection work, dusting, or other non-manufacturing process, or the *occasional* carrying on of sorting (chipping) and biscuit stopping of articles would not prevent the Biscuit Warehouse from being a storage room within the meaning of the Factory Act. Manufacturers may use the exemption provided by Form No. 60, under the Factory Act, which permits warehouses to be withdrawn from the requirement of limewashing within every consecutive period of 14 months, but they must bear in mind that if it appear to an Inspector that any part of a factory to which the exemption applies is not in a cleanly state, he may, by written notice, require the occupier to limewash or wash the same; and in the event of the occupier failing to comply with such requisition within two months from the date of the notice, the special exemption shall cease to apply to such part of a factory.

Careful attention must be paid to the Regulation as to systematic carrying or lifting work.

No young person or child shall be employed in systematic carrying or lifting work, without a certificate of permission to work, specifying the maximum weight which he or she may carry; and no young person or child so employed shall be allowed to lift or carry any weight in excess of that named in the certificate. Provided that:—

> No certificate shall permit the carrying of more than 30 lbs. by anyone under 16 years of age. (Reg. 1 (*c*) and (*c* i.).)

Lead Processes.

Dipping and Ware Cleaning after Dipping or other Process.—We now reach another group of processes in which the Regulations are more stringent even than the foregoing, because the dust to be dealt with contains lead compounds which may give rise to plumbism.

The first regulation with regard to Dipping Houses shows this clearly:—

> All dipping houses and ware cleaning rooms shall be well lighted; neither dipping nor ware cleaning shall be done in places which, in ordinary fine weather, are dependent on borrowed light or artificial light during the hours of daylight. (Reg. 15 (*c*).)
>
> The floors of all dipping houses, dippers' drying rooms, and ware cleaning rooms shall be washable impervious floors, and shall be thoroughly cleaned daily by an adult male, after work has ceased for the day, with a sufficient supply of water, and a mop or similar implement; provided that, in the case of china dippers' drying rooms, this cleaning may be done before work commences in the morning, instead of after work has ceased for the day. (Reg. 12 (*d*).)
>
> In dipping houses, all parts of walls sufficiently near to any dipping tub to be splashed with glaze shall be tiled, or painted with washable paint, or otherwise treated in such a manner as to permit of thorough cleaning by a wet process. (Reg. 15 (*a*).)
>
> The above-named parts of walls, as well as the dipping tubs and any objects which are splashed with glaze, shall be thoroughly cleaned daily by a wet process. (Reg. 15 (*b*).)
>
> The above requirements as to the daily cleaning of floors by a moist method shall not apply to those parts of the floors on or immediately above which articles of pottery are necessarily left overnight, if adequate provision is made for the cleaning of the floors as soon as the articles are removed. (Reg. 12 (*g*).)

Note.—The Joint Committee of Pottery Manufacturers has agreed to strongly urge on all manufacturers that, to carry out Regulation 15 (*b*) thoroughly, all dipping tubs should be placed on a substantial wooden stand, and that the outside of the dipping tubs and the stands should be painted with a washable enamel paint; and that anything approaching to the dry cleaning of any appliances used in a dipping house is illegal.

> *Work Benches.*—Work benches, if not covered by sheet metal or constructed with an impervious surface, shall be strongly and solidly constructed of closely jointed timber, and the surface of work benches shall be well maintained. (Reg. 13 (*a*).)
>
> All work benches in use shall be thoroughly cleaned daily by a moist method. (Reg. 13 (*b*).)

Boards.—Every board on which dipped ware has been placed shall, on each occasion on which it has been used for one set of articles, and before being used for another, be thoroughly cleaned with clean water by an adult male. (Reg. 17 (*a*).)

"Nailed" or "pegged" boards shall be cleaned under a strong jet of water; no new boards of this description shall be introduced except where necessary to hold china furniture or other special articles which cannot be carried on ribbed or plain boards. (Reg. 17 (*b*).)

Boards in use for processes included in Part 1. of the Schedule shall be clearly marked by painting them red at the ends and for a distance of at least 6 ins. from each end of the board on both sides, so as to distinguish them from other boards which do not come into contact with lead. Boards so marked shall not be used in any department unless they have been thoroughly cleaned, and shall not be used in the clay departments under any circumstances. Boards not so marked shall not be taken into any place where a process included in Part I. of the Schedule is carried on; but this shall not apply to placing shops in which both biscuit and glost ware are being placed, provided that the boards used for biscuit ware are kept separate and returned to their respective departments without any contact with the boards used for glost ware. (Reg. 17 (*c*).)

No woman, young person or child shall be employed in cleaning these boards. (Reg. 1 (*a* vi.).)

The Joint Committee strongly recommends that dipping house boards shall be placed on a grating, over a water tank, in some recognised place where they are least likely to be brushed by the aprons or clothes of passing workers.

The duty of attending to the Regulations as to the use of boards is also laid upon the workers as follows:—

The boards used in the dipping house, dippers' drying room, or glost placing shops shall not be used in any other department, except after being cleaned, as directed in Regulation 17. (Reg. 35 (*a*).)

No board on which dipped ware has been placed shall be used for a second set of dipped articles until it has been thoroughly cleaned, in accordance with Regulation 17. Where a convenient grid or other suitable contrivance is provided for depositing such boards after use, and before being cleaned, the worker who has removed the ware from any such board shall place the board thereon. (Reg. 35 (*b*).)

Boards which are marked for use in lead processes shall not be used in any department unless they have been thoroughly cleaned, and shall not be used in the clay departments under any circumstances. (Reg. 35 (*c*).)

Threading Up.—In the process of threading up, rubber or other washers, used to keep articles apart when being dipped, shall be thoroughly washed in a colander after each dipping. Wires shall also be washed after each dipping. (Reg. 16.)

Threading-up shall not be carried on except in a place sufficiently separated from the dipping house, or any other workroom in which a scheduled lead process is carried on. (Reg. 24 (*a*).)

Sufficient separation might be given by enclosing the place by a partition not less than 8 ft. high.

Mangles.—All mangle shelves shall be thoroughly cleaned by a wet process by an adult male on a fixed day of each week, after work has ceased for the day. The day on which this cleaning is to take place shall be fixed by entry in the register kept in pursuance of Regulation 3. (Reg. 18.)

No woman, young person, or child shall be employed in the cleaning of mangles or any part thereof. (Reg. 1 (*a* vii.).)

All mangles shall be so ventilated as to provide for the maintenance of a flow of air into the hot chamber from the adjoining workroom.

In case of vertical or "tower" mangles:—(1) The pipes for heating the mangle shall be fixed above the top of any opening at which workers put in or take off ware: and (2) There shall be a free outlet into the air above, so formed and placed as to ensure an outflow whatever the direction of the wind. (Reg. 9 (*d*).)

Age.—No young person or child shall be employed as a dipper. (Reg. 1 (*f*).) That is *no* person under 18 years of age.

No girl under 17 years of age, and no boy under 16 years of age shall be employed as a dipper's assistant or ware cleaner. No woman or young person shall be employed in the lawning of glaze except where less than a quart of glaze is lawned at a time for the workers' own use. (Reg. 1 (*a* iii.).)

In low solubility glaze factories:—(1) No person under 16 years of age shall be employed as a dipper; (2) No person under 15 years of age shall be employed as a dipper's assistant, ware cleaner, or glost placer. (Reg. 1 (*k*).)*

"*Low Solubility Glaze*" means:—

(1) A glaze which does not yield to dilute hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described below; or

(2) A glaze containing no lead or lead compound other than galena.

A weighed quantity of dried material is to be continuously shaken for one hour, at the common temperature, with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0·25 per cent. of HCl. This solution is thereafter to be allowed to stand for one hour, and to be passed through a filter. The lead salt contained in an aliquot portion of the clear filtrate is then to be precipitated as lead sulphide, and weighed as lead sulphate.

Ware Cleaning.—Ware cleaning after the application of glaze or other process, shall not be carried on without the use of an *efficient exhaust draught*, except as set forth later in this Regulation. (Reg. 7 (*a* xii.).)

Nothing in these regulations shall render it compulsory to provide an exhaust draught for ware cleaning if this process is carried on entirely with the use of wet materials; or if the ware cleaning be done within 15 minutes after the moment when the glaze was applied; but an *efficient exhaust draught* shall always be provided and used if any dry materials or implements, such as knives or scrapers, are used after the glaze is dry or more than 15 minutes after the moment when the glaze was applied. (Reg. 7 (*k*).)

Other Regulations governing the conditions under which ware cleaning must be conducted are:—

In the process of ware cleaning after the application of glaze by dipping or other process, wherever it is practicable to use damp sponges or other damp materials, they shall be provided in addition to the knife or other instrument and shall be used. (Reg. 7 (*h*).)

In the process of ware cleaning, after the application of glaze by dipping or other process, sufficient arrangements shall be made for any glaze scraped off, which is not removed by the exhaust draught, to fall into water. All water troughs or other receptacles provided in pursuance of this clause shall be cleaned out and supplied with fresh water as often as necessary, and in no case less often than once a week; and no scrapings of glaze shall be allowed to collect in a dry condition on the sides of the water receptacle. Where grids or gratings are fitted over the water troughs or other receptacles mentioned in the foregoing paragraph they shall be kept clean by repeated sponging or wiping with wet material during the time that the process of ware cleaning is being carried on. No boards or other articles shall be placed, even temporarily, on any such water trough, in such a way as to interfere with the efficient use of the trough. (Reg. 7 (*l*).)

In all processes the occupier shall, as far as practicable, adopt efficient measures for the removal of dust and for the prevention of any injurious effects arising therefrom. (Reg. 7 (*m*).)

All these Regulations for the prevention of dust or its complete removal by exhaust draughts wherever it does arise in the dipping house or ware-cleaning rooms, are of the utmost importance; probably in no section of a pottery factory is the most careful observance of the Regulations in every detail of such overwhelming importance, so that both the management and workers in these departments should unite in loyal observance of them. The Regulations stipulate that the workers shall observe the Regulations set forth above by the following:—

No person shall, in any way, interfere, without the knowledge and concurrence of the occupier or manager, with the means and appliances provided by the employers for ventilation, and for the removal of dust. (Reg. 32.)

Every worker shall so conduct his or her work as to comply strictly with these regulations, and to avoid, as far as practicable, making or scattering dust, or refuse, or causing accumulation of such. (Reg. 36.)

Overalls and Head Coverings.—The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in the processes of dipping and ware-cleaning or any other process carried on in the dipping-house or ware-cleaning rooms. (Reg. 4 (*a*).)

Head coverings shall be adequate to protect the hair from dust, and shall be worn in such a way as to be effective for this purpose. (Reg. 4 (*b*).)

The occupier shall provide and maintain suitable aprons of a waterproof or similar material which can be sponged daily, for all dippers, dipper's assistants, and ware cleaners; provided that, if the front of the overall supplied to any such worker in pursuance of these Regulations is made of a material which can be sponged daily, no separate apron need be provided for that worker. (Reg. 4 (*c*).)

No person shall be allowed to work in any process included in the Schedule without wearing the above named overalls and head coverings as well as aprons when provided in pursuance of the preceding paragraph. (Reg. 4 (*d*).)

All aprons made of waterproof or similar material, and all overalls or parts of overalls made of such material, shall be thoroughly cleaned daily by the wearers by sponging or other

* This is one of the many exemptions rightly given in low-solubility or leadless glaze factories. The Home Office will issue special placards for all such factories, embodying the exemptions.

wet process. All other overalls or parts of overalls and all head coverings shall be washed or renewed at least once a week, and the occupier shall provide for washing, renewals, and necessary repairs of all overalls and head coverings to be done either at the factory or at the laundry ; and no worker shall be allowed, to take home any overalls, head coverings, or aprons provided in pursuance of these Regulations. (Reg. 4 (*e*).)

All overalls, head coverings, and aprons provided in pursuance of these Regulations, when not in use or being washed or repaired, shall be kept in proper custody ; for this purpose there shall be provided a cupboard or cupboards or room or rooms suitably situated and sufficiently large to hold the overalls, head coverings, and aprons ; a separate peg shall be provided for each worker who is required by these Regulations to wear overalls. (Reg. 4 (*f*).)

Outdoor Clothing.—A cupboard or cupboards or room or rooms shall be provided for workers to deposit clothing put off during working hours ; the accommodation provided for this purpose shall be sufficient to hold the outdoor clothing of all workers who are required by these regulations to wear overalls, and a separate peg shall be provided for each such worker ; all such cupboards or rooms shall be entirely separated from any source of lead or other dust, and from any place provided for the keeping of overalls, head coverings or aprons, and shall be kept thoroughly clean by the occupier. (Reg. 5 (*a*).)

The occupier shall make adequate provision for drying such outdoor clothing, if wet, during the time it is put off in working hours ; this provision shall not be made in any place where there is any source of lead or other dust, or in any place provided for the keeping of overalls, head coverings, or aprons, or in any mess-room provided in pursuance of these Regulations, unless such provision consists of cupboards arranged against the wall and ventilated directly to the outside air, in which case the space occupied by such cupboards shall not be deemed to be part of the mess-room accommodation, and the provision shall be subject to the approval of the Inspector of Factories for the district. (Reg. 5 (*b*).)

The workers themselves are responsible for seeing that the clothing they put off in working hours is deposited in the place provided for it. (Reg. 30 (*c*).)

Food.—No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during meal-times in any place in which is carried on any process included in the schedule. (Reg. 6 (*a*).)

Mess-room accommodation shall be provided for the workers employed in the processes included in the Schedule. (Reg. 6 (*b*).)

A supply of milk, or cocoa made with milk, shall be provided for all women and young persons working in processes included in Part I. of the Schedule (*i.e.*, the Scheduled Lead Processes), who commence work before 9 a.m. Not less than half a pint shall be provided for each worker at the expense of the occupier. (Reg. 6 (i.).)

The workers themselves are responsible for carrying out the following regulations, and the management must see that they do so :—

No person shall introduce, keep, prepare or partake of any food, drink, or tobacco, or remain during meal times in any place in which is carried on any process included in the Schedule, (Reg. 31 (*a*).)

Every worker for whom milk or cocoa is provided in accordance with Regulation 6, shall drink the same, unless a medical certificate is produced showing cause for exemption from this requirement. (Reg. 31 (*b*).)

Lavatories.—Lavatory accommodation must be provided for all persons who work as dippers, dipper's assistants and ware cleaners ; for details of provision required, see p. 578.

It is the duty of the worker to use this lavatory accommodation. (Reg. 33.)

*Hours of Employment.**—No person employed as a dipper, dipper's assistant or ware cleaner shall be employed for more than *four* hours without an interval of at least half-an-hour for a meal. (Reg. 25 (*a*).)

No woman or young person who is employed in a dipping house, dipper's drying room or in any process of ware cleaning, shall be employed in the factory *in any capacity* for more than 48 hours in any week. (Reg. 25 (*b*).)

No adult male who is employed as a dipper, dipper's assistant or ware cleaner shall be employed in the factory in any capacity for more than 48 hours in any week, provided that where such an adult male worker has been employed in a process included in Part I. of the schedule, for not more than eight hours in any one day, or 30 hours in all in a week, he may be employed during the same week on work not involving a contact with lead up to a limit of 54 hours for that week. (Reg. 25 (*c*).)

Except that it shall be permissible to employ adult male dippers, dipper's assistants, ware cleaners and glost placers overtime, in addition to the prescribed weekly periods of 48 and 54 hours ; provided that such overtime shall not, in any factory to which these Regulations apply, exceed four hours in any week, or 36 hours in any period of twelve months. The employer shall enter in the prescribed register particulars of all such overtime, and shall also send notice, with the prescribed particulars, to the Inspector of Factories for the district, before 8 o'clock in the evening of any day when a man is employed overtime in pursuance of this exception. An occupier who avails himself of this exception shall, if called upon, produce to the Inspector of Factories for the district evidence of press of orders or other circumstances rendering the overtime necessary.

Adult male dippers ware cleaners and glost placers may be employed in addition to the above-named hours, as sitters-up with an oven after the termination of the period of employment on one day in the week, and before the commencement of the period of employment on the next day ; provided that no such worker shall be employed in any capacity within twelve hours of the cessation of the period of sitting-up. (Reg. 25 (*e*).)

All the above weekly and daily periods shall be the maximum permissible periods of actual work, exclusive of meal times. (Reg. 25 (*g*).)

Medical Examination.—All persons employed in the processes of dipping, or ware cleaning, or in rooms where such processes are carried on, shall be examined once in each calendar month by the *Surgeon.* (Reg. 2 (*a*).)

The fees for all medical examinations made in pursuance of these Regulations shall be paid by the employer, and shall not be charged to the worker, whether he be in regular or casual employment. Provided that casual workers examined at the *Surgeon's* surgery shall pay a fee of 1s. for each certificate entered in the portable register ; this fee shall be refunded by the occupier who first employs the worker after such examination ; and the occupier shall record in the portable register the fact that the fee has been refunded. (Reg. 2 (*e*).)

A notice shall be fixed in a prominent place in the factory, showing clearly the time appointed for the *Surgeon's* periodical visit ; and an amending notice shall be affixed forthwith if it is found necessary to alter the date or hour ; wherever possible, not less than three days' notice of a change of date shall be given. (Reg. 2 (*f*).)

A private room shall be provided for all medical examinations. No one shall be present except such other medical man as the *Surgeon* may, with the worker's consent, admit ; and in addition in the case of a female any one female relative may be present, or alternatively any one workwoman in the factory approved by the worker and the *Surgeon.* (Reg. 2 (*g*).)

No person after suspension shall be allowed to work in any process in which examination by the *Surgeon* is required by these regulations, without a certificate of permission to work. (Reg. 2 (*h*).)

The duty of presenting themselves for these monthly examinations is laid on the workers.

All persons employed in the processes in the Schedule shall present themselves at the appointed times for examination by the *Surgeon* as provided in Regulation 2. (Reg. 29 (*a*).)

No person after suspension shall work in any process in which examination by the *Surgeon* is required by these regulations without a certificate of permission to work. (Reg. 29 (*b*).)

The Joint Committee recommend manufacturers to post notices on their works that any worker subject to examination who fails to attend at the appointed time without sufficient cause shall be subject to instant dismissal, as his willful absence is a contravention of Regulation 29 (*a*).

Dippers' Drying Rooms.—The regulations as to the floors of dipper's drying rooms are the same as those given above for the floors of dipping houses. (Reg. 12 (*d*)).

The heating and ventilation of dippers' drying rooms are governed by the same regulations as those already set forth under Potters' Stoves, p. 570. (Reg. 12 (*e*).)

The temperature regulations must also be carefully observed (p. 570).

Glaze Blowing.

(See also Aoregraphing and Colour Blowing, p. 576).—The process of glaze blowing shall not be carried on without the aid of an *efficient exhaust draught.*

The same stringent provisions as to cleanliness, the avoidance of splashes of glaze or dust that are laid down for dipping houses apply here. (See p. 573.)

Any ware cleaning that may be done after glaze blowing is subject to the same regulations as those imposed on ware cleaning after dipping. (See p. 573.)

The regulations as to the use of work boards, work benches, overalls and head coverings, outdoor clothing, lavatories and monthly medical examination, apply equally to those who work in a room where glaze blowing is carried on. (See pp. 573 and 574.)

Food.—No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during

* These restrictions as to hours of employment apply to all workers in scheduled lead processes except for the slight variation in glost-placing (*q.v.*).

meal times in any place in which glaze blowing is carried on. (Reg. 6 (*a*).)

Mess room accommodation shall be provided for the workers employed in glaze blowing. (Reg. 6 (*b*).)

A supply of milk, or cocoa made with milk, shall be provided for all women and young persons working in glaze blowing processes who commence work before 9 a.m. Not less than half-a-pint shall be provided for each such worker at the expense of the occupier. (Reg. 6 (1).)

The workers themselves are responsible for carrying out the following regulations, and the management must see that they do so :—

No person shall introduce, keep, prepare or partake of any food, drink or tobacco, or remain during meal times in any place in which glaze blowing is carried on. (Reg. 31 (*a*).)

Every worker for whom milk or cocoa is provided in accordance with Regulation 6 shall drink the same, unless a medical certificate is produced showing cause for exemption from this requirement. (Reg. 31 (*b*).)

Refer to the detailed regulations for dipping, &c., pp. 573 and 574.

The hours of employment for women and young persons in these processes are limited in exactly the same way as those employed in dipping or ware cleaning. (See p. 574.)

No woman, young person or child shall be employed in the lawning of glaze, except where less than a quart of glaze is lawned at a time for the worker's own use. (Reg. 1 (*a* iii.).)

Cleaning of Floors and Work Benches.—There shall be provided and maintained :—(*a*) Either impervious floors ; (*b*) or wooden floors with a thoroughly smooth and sound surface, constructed in such a substantial manner as to be free from permanent sag, and maintained in such repair that they can be properly cleaned by a moist method, and that no dust can fall through into the rooms below. (Reg. 12 (*b* i.).)

The floors, when the rooms are in use, shall be thoroughly cleaned daily, by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. next morning. (Reg. 12 (*b* ii.).)

Work benches, if not covered with sheet metal or constructed with an impervious surface, shall be strongly and solidly constructed of closely jointed timber, and the surface of the work benches shall be well maintained. (Reg. 13 (*a*).)

All work benches in use shall be thoroughly cleaned daily by a moist method. (Reg. 13 (*b*).)

Glaze Painting (Majolica Painting).

The regulations set forth under the head of Majolica Painting will apply to glaze painting of all kinds, where the glaze contains more than 5 per cent. of soluble lead compounds.

The following regulations shall apply to the process of majolica painting :—

(*a*) A sponge and bowl of clean water, to rinse the fingers, shall be provided on the bench beside each person employed in majolica painting.

(*b*) In all majolica painting shops where there is no adjoining lavatory accommodation, there shall be provided in the room a lavatory sink with a tap, a constant supply of water, and towels.

(*c*) All splashes of glaze falling on the benches, or surrounding objects, shall be immediately removed by a wet sponge or other wet material.

(*d*) No floor or work bench shall be deemed to have been thoroughly cleaned, in accordance with Regulations 12 and 13, unless all splashes of glaze have been completely removed.

(*e*) Mottling, or any similar method of applying glaze, shall only be carried on under the Regulations applying to majolica painting.

(*f*) All cleaning and scraping, including panel cutting, after majolica dipping, painting, or blowing, shall be deemed to be ware cleaning, and shall only be done in compliance with the rules for the latter process.

The Regulations as to the use of work boards, as to work benches, overalls (head coverings are not required), outdoor clothing, food, lavatories and monthly medical examinations apply equally to all who work in a room where Majolica Painting is carried on. (Refer to the detailed Regulations set forth under Dipping, pp. 573 and 574.

Cleansing of Floors and Work Benches.—There shall be provided and maintained :—

(*a*) Either impervious Floors ; or

(*b*) Wooden Floors with a thoroughly smooth and sound surface, constructed in such a substantial manner as to be free from permanent sag, and maintained in such repair that they can be properly cleaned by a moist method, and that no dust can fall through into rooms below. (Reg. 12 (*a* i.).)

The floors, when the rooms are in use, shall be thoroughly cleaned daily, by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. next morning. (Reg. 12 (*a* ii.).)

The hours of employment for workers in glaze painting are limited in the same way as those employed in Dipping or Ware Cleaning. (See p. 574.)

No woman, young person, or child shall be employed in the lawning of glaze, except where less than a quart of glaze is lawned at a time for the worker's own use. (Reg. 1 (*a* iii.).)

The Regulations governing systematic lifting or carrying work need attention in these departments. (See p. 565.)

Glost Placing.

The Official Definition states that :—

Glost Placing includes the operations of carrying saggers of ware into the glost oven and carrying them out again after the glost firing, as well as the operation of placing the ware in the saggers for glost firing ; but not placing of ware on cranks or similar articles prior to their transfer to saggers or kilns by other persons.

In all Glost Placing shops the following Regulations apply :—

The floors of all Glost Placing Shops shall be impervious even floors of brick, flag, or similar hard material, and shall be kept in good repair ; they shall be thoroughly sprinkled and swept by an adult male whenever the work of setting in an oven has ceased, and under any circumstances at least once a day. (Reg. 12 (*c*).)

The above requirements as to the daily cleaning of floors by a moist method shall not apply to those parts on or immediately above which articles of pottery are necessarily left overnight, if adequate provision is made for the cleaning of the floors as soon as the articles are removed. (Reg. 12 (*g*).)

Boards.—With regard to the cleaning (washing) of boards this can be done in the Glost Placing Shop or in the Dipping House provided there is an appointed place and suitable appointed persons (*i.e.*, adult males).

No woman, young person, or child shall be employed in the cleaning of these boards. (Reg. 1 (*a* vi.).)

For the Regulations as to boards and their cleaning see under Dipping, p. 573.

Work Benches.—The following Regulations apply to all work benches in Glost Placing Shops.

Work benches, if not covered with sheet metal or constructed with an impervious surface, shall be strongly and solidly constructed of closely jointed timber, and the surface of the work benches shall be well maintained. (Reg. 13 (*a*).)

All work benches in use shall be thoroughly cleaned daily by a moist method. (Reg. 13 (*b*).)

It is obvious that work-benches covered with sheet metal are useless in glost-placing shops. Where the benches must be movable, strong, well-kept wooden benches must be used. In some cases fixed benches are practicable, and then slate slabs built on brick pillars are excellent. Where workers work at opposite sides of the same bench and face each other it is advisable to maintain a screen up the middle of the bench.

Flow Powder.—If Flow material, which is officially defined as "Any material containing lead which is placed in saggers with a view to its entire or partial volatilisation during the glost placing of the ware," is mixed or *weighed out* in the Glost Placing Shop, the work must be done under a hood connected with an efficient exhaust draught if the material yields to hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described in the definition of Low Solubility Glaze. (Reg. 7 (*a* xiii.).)

There is no doubt that Flow Powder has often been carelessly used, because nothing was said about its harmfulness in previous codes of Special Rules. The ordinary flow powder in use must be handled with extreme care, so as to avoid the production of fine lead dust in the air of the rooms where it is prepared and weighed out or in the Glost Placing Shops where it is used. I believe that some manufacturers have successfully employed the material not as powder but in cakes or small rolls ; a method which must greatly diminish the dust and therefore the worst danger attendant on its use.

Thimble Picking.—This process is defined officially as meaning :—The picking over, sorting, or re-arranging for further use, of thimbles, stilts, spurs, strips, saddles, or any similar articles which have been used for the support of articles of pottery during the process of Glost Firing.

Two Regulations specially relate to this process. (1) All material collected from floors or work benches of Glost Placing Shops shall be riddled in an enclosed receptacle before it is taken to a thimble picking room. (Reg. 19.)

The ash sifter used for sifting ashes from a domestic firegrate is a suitable type of "enclosed machine."

(2) Thimble picking shall not be carried on except in a place sufficiently separated from the Glost Placing Shop or any other workroom in which a scheduled lead process is carried on. (Reg. 24 (*a*).)

The sufficient separation would be given by enclosing one end of the Glost Placing Shop, or the space between the hovels of two

glost ovens, by a sound partition not less than 8 ft. high, except in draughty places.

Restrictions of Employment.—No woman, young person, or child shall be employed as a glost placer, except in the placing of china furniture or electrical fittings; and no girl under 17 years of age and no boy under 16 years of age shall be employed as a glost placer in the placing of china furniture or electrical fittings.* Except that male young persons over 16 years of age may be employed in the process of glost placing for the purpose of preparing saggers and assisting in the sagger-house during the drawing of ovens, provided that they shall not place any ware in the saggers. (Reg. 1 (*h*).) These workers are all subject to the 48 hours' week. (Reg. 25 (*b*).)

Hours of Employment.—No person shall be employed in the process of glost placing for more than four hours and a half without an interval of half an hour for a meal.

No adult male who is employed as a glost placer shall be employed in the factory in any capacity for more than 54 hours in any week. (Reg. 25 (*d*).)

Except that it shall be permissible to employ adult male dippers, dippers' assistants, ware cleaners, and glost placers overtime, in addition to the prescribed weekly periods of 48 and 54 hours; provided that such overtime shall not, in any factory to which these Regulations apply, exceed four hours in any week, or 36 hours in any period of twelve months. The occupier shall enter in the prescribed register particulars of all such overtime, and shall also send notice, with the prescribed particulars, to the Inspector of Factories for the district before eight o'clock in the evening of any day when a man is employed overtime in pursuance of this exception. An occupier who avails himself of this exception shall, if called upon, produce for the Inspector of Factories for the district evidence of press of orders or other circumstances rendering the overtime necessary.

Adult male dippers, ware cleaners, and glost placers may be employed, in addition to the above-named hours, as sitters-up with an oven after the termination of the period of employment on one day in the week and before the commencement of the period of employment on the next day; provided that no such worker shall be employed in any capacity within twelve hours of the cessation of the period of sitting-up. (Reg. 25 (*c*).)

All the above weekly and daily periods shall be the maximum permissible periods of actual work, exclusive of meal times. (Reg. 25 (*g*).)

Food.—No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during meal times in any place in which glost placing is carried on. (Reg. 6 (*a*).)

Mess Room accommodation shall be provided for the workers employed in the process of glost placing. (Reg. 6 (*b*).)

A supply of milk, or cocoa made with milk, shall be provided for all women and young persons working as glost placers under Reg. 1 (*h*) above, and who commence work before 9 a.m. Not less than half-a-pint shall be provided for each such worker at the expense of the occupier. (Reg. 6 (*l*).)

The workers themselves are responsible for carrying out the following Regulations, and the management must see that they do so:—

No person shall introduce, keep, prepare or partake of any food, drink, or tobacco, or remain during meal times in any place in which glost placing is carried on. (Reg. 31 (*a*).)

Every worker for whom milk or cocoa is provided in accordance with Regulation 6 shall drink the same, unless a medical certificate is produced showing cause for exemption from this requirement. (Reg. 31 (*b*).)

Overalls, *but not head coverings*, provision for storage and drying of out-door clothing, lavatory and mess-room accommodation and medical examination must be provided for Glost Plaeers as for all other workers in scheduled lead processes. (See pp. 573 and 574.)

On their part the workpeople are specially enjoined to observe with the greatest care the following regulations, which are reprinted here, because they have been so often neglected or even set at defiance by glost placers.

All persons employed in glost placing shall present themselves at the appointed time for examination by the *Surgeon* as provided in Regulation 2. (Reg. 29 (*a*).)

No person after suspension shall work in any process in which examination by the *Surgeon* is required by these Regulations without a certificate of permission to work. (Reg. 29 (*b*).)

All persons employed in glost placing shall, when at work, wear overalls, as required by Regulation 4. The said overalls shall not be worn outside the factory or workshop, and shall not be removed therefrom except for the purpose of being washed or repaired. No overalls, provided in pursuance of Regulation 4, shall, under any circumstances, be taken to a worker's home. (Reg. 30 (*a*).)

The overalls, when not being worn, and clothing put off during working hours, shall be deposited in the respective places provided by the occupier for such purposes under these Regulations. (Reg. 29 (*c*).)

No person employed in glost placing shall leave the works or partake of meals without previously and carefully cleaning and washing his or her hands. (Reg. 33 (*a*).)

No person employed shall remove or damage the washing basins or conveniences provided under these Regulations. (Reg. 33 (*b*).)

The persons appointed by occupiers shall clean the several floors, walls, workbenches, appliances and other objects regularly as prescribed in these Regulations. (Reg. 34.)

The boards used in dipping houses, dippers' drying room, or glost placing shops shall not be used in any other department, except after being cleaned, as directed in Regulation 17. (Reg. 35 (*a*).)

No board on which dipped ware has been placed shall be used for a second set of dipped articles until it has been thoroughly cleaned, in accordance with Regulation 17. Where a convenient grid or other suitable contrivance is provided for depositing such boards after use and before being cleaned, the worker who has removed the ware from any such board shall place the board thereon. (Reg. 35 (*b*).)

Boards which are marked for use in lead processes shall not be used in any department unless they have been thoroughly cleaned, and shall not be used in the clay departments under any circumstances. (Reg. 35 (*c*).)

Every worker shall so conduct his or her work as to comply strictly with these Regulations, and to avoid, as far as practicable, making or scattering dust, or refuse, or causing accumulation of such. (Reg. 36.)

Drawing Glost Ovens and Emptying of Glazed Ware.

These processes are not lead processes in any sense of the word, but as the fired ware is generally drawn into a space or portion of the rooms where glost placing is carried on at other times, certain precautions must be taken in order that those engaged in this work are not to be considered, and treated as workers in a scheduled lead process.

(1) Every care must be taken to see that the portion of the workroom into which the ware is to be drawn is efficiently separated from any part of the room or from any other rooms in which glost placing or other scheduled lead process is being carried on. This can be done by erecting a screen or screens, which must be continuous from wall to wall, and not less than 8 ft. high. Wooden screens, piles of saggers, or impervious cloth or rick sheeting hung over a pole and fastened down to the floor, would meet the case.

(2) All parts of the floor and all work benches in the space enclosed for drawing in must have been thoroughly cleaned by a moist process before 3 a.m. on the morning when the work is commenced.

Nothing in Regulations 4 and 13 shall be deemed to require overalls or head coverings to be provided for, or worn by, any man during the time he is engaged in drawing a glost oven. (Exemption 5.)

Men employed only as glost drawers shall not be deemed to be employed in a process included in Part I. of the Schedule if they do not work in any place in which a process named in Part I. of the Schedule is being carried on. (Exemption 6.)

Temperature.—The regulations referring to Oven Drawing apply here. (See p. 571.)

Casual Workers Engaged in Glost Placing, Dipping, or other Scheduled Lead Process.

The casual lead worker must be provided with a portable health register. Before a casual worker is employed at a factory the management should insist upon the production of his portable register. The management must see that the names of all casual workers employed in scheduled lead processes are entered in the Factory Register just as those of other lead workers, but preferably on a separate sheet.

If a casual worker is employed on a factory at the time of the *Surgeon's* periodical visit for the examination of lead workers, he must be presented for examination.

Failing such opportunity, a casual worker may present himself at the *Surgeon's* surgery and shall pay a fee of 1s. for each certificate entered in his portable register; this fee shall be refunded by the occupier who first employs the worker after such examination; and the occupier shall record in the portable register the fact that the fee has been refunded. (Reg. 2 (*e*).)

Aerographing and Colour Blowing.

The general Regulations for processes in which lead compounds are handled, such as provision of overalls and head coverings, provision for storage and drying of outdoor clothing, lavatory and mess-room accommodation, medical examination, hours of employment, &c., apply to all persons engaged in the process of colour blowing by aerograph or other appliances when the colours contain lead compounds, and whether they are applied on the glaze or on the biscuit ware. For details of these Regulations see pp. 572, 573, and 574.

* The Regulations governing the lifting and carrying of saggers full of ware by women, and (*a*) must be observed here (see p. 569).

The processes may not be conducted except under a suitable hood connected with an efficient exhaust draught. (Reg. 7. (*a* xvii.).)

The following additional regulations also apply specially to these processes.

No short-sighted person shall be engaged to do glaze or colour blowing, unless wearing suitable glasses. No person shall be employed as a glaze or colour blower, unless the *Surgeon* has entered in the health register a certificate stating that he has examined the worker's sight, and is satisfied that he or she can be so employed without a breach of this Regulation. (Reg. 22 (*a*).)

All hoods in which the blowing of glaze or colour is carried on shall be thoroughly cleaned daily by a wet process. (Reg. 22 (*b*).)

Glaze or colour blowing shall not be done with the mouth. (Reg. 22 (*c*).)

Decoration on unfired clay ware by means of coloured clay slips shall not be regarded as colour blowing for the purpose of any of the Regulations applying especially to the latter process. (Reg. 22 (*d*).) See also under Throwers and Turners, p. 568.

In the workshops where these processes are conducted there shall be provided and maintained :—(*a*) Either impervious floors ; or (*b*) Wooden floors with a thoroughly smooth and sound surface constructed in such a substantial manner as to be free from permanent sag, and maintained in such repair that they can be properly cleaned by a moist method, and that no dust can fall through into rooms below. (Reg. 12 (*b* i.).)

The floors, when the rooms are in use, shall be thoroughly cleaned daily by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. next morning. (Reg. 12 (*b* ii.).)

Work Benches.—Work benches if not covered with sheet metal or constructed with an impervious surface, shall be strongly and solidly constructed of closely jointed timber, and the surface of the work benches shall be well maintained. (Reg. 13 (*a*).)

All work benches in use shall be thoroughly cleaned daily by a moist method. (Reg. 13 (*b*).)

Food.—No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during meal times in any place in which aerographing or colour blowing is carried on. (Reg. 6 (*a*).)

Mess-room accommodation shall be provided for the workers employed in the processes of aerographing or colour blowing. (Reg. 6 (*b*).)

A supply of milk, or cocoa made with milk, shall be provided for all women and young persons employed in Aerographing or colour blowing who commence work before 9 a.m. Not less than half-a-pint shall be provided for each worker at the expense of the occupier. (Reg. 6 (*l*).)

The workers themselves are responsible for carrying out the following regulations, and the management must see that they do so :—

No person shall introduce, keep, prepare, or partake of any food, drink, or tobacco, or remain during meal times in any place in which aerographing or colour blowing is carried on. (Reg. 31 (*a*).)

Every worker for whom milk or cocoa is provided in accordance with Regulation 6 shall drink the same, unless a medical certificate is produced showing cause for exemption from this requirement. (Reg. 31 (*b*).)

Ground Laying and Colour Dusting.

Workers engaged in these processes must receive all the attentions prescribed for workers in scheduled lead processes, as regards work benches, overalls and hood coverings, provision for the storage and drying of outdoor clothing, storage of food, lavatory, and mess-room accommodation, medical examination, &c. (See pp. 572, 573, and 574.)

In addition the following special regulations must be observed in this department :—

The following processes shall not be carried on without the use of an efficient exhaust draught :—

(*a*) The lawning of dry colours. (Reg. 7 (*a* xiv.).)

(*b*) Ground laying, including the wiping off of colour after its application to the face of the ware. (Reg. 7 (*a* xv.).)

(*c*) Colour dusting, whether under-glaze or on-glaze, including the wiping off of colour after its application to the surface of the ware. (Reg. 7 (*a* xvi.).)

All pieces of cotton wool or similar materials which have been used in the process of ground laying, or colour dusting shall be kept in a proper receptacle. All pieces of waste cotton wool or similar materials which have been so used shall be immediately burnt. (Reg. 21.)

With due care these processes of ground laying and colour dusting, once the most dangerous of all the occupations in a pottery works, have already been made safe processes. The only new regulations here are Reg. 7 (*a* xiv.) and Reg. 21, which are designed to eliminate the last traces of special risk. It is most important that all the regulations are carefully observed, and that the worker makes no unnecessary dust in the handling of the materials or in carelessly throwing about or batting the cotton wool used in the process.

Floors.—The floors, when the rooms are in use, shall be thoroughly cleaned daily, by a moist method, by an adult male after work has ceased for the day, and before 3 a.m. next morning ; except that in rooms in which ground laying is done, the cleaning prescribed by this Regulation may be done before work commences in the morning, provided that in no case shall any work be carried on in the room within one hour after such cleaning as aforesaid has ceased. (Reg. 12 (*b* ii.).)

Food.—No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during meal times in any place in which ground laying or colour dusting is carried on. (Reg. 6 (*a*).)

Mess-room accommodation shall be provided for the workers employed in the processes of ground laying or colour dusting. (Reg. 6 (*b*).)

A supply of milk, or cocoa made with milk, shall be provided for all women and young persons working in ground laying or colour dusting. Half-a-pint shall be provided for each worker at the expense of the occupier. (Reg. 6 (*l*).)

The workers themselves are responsible for carrying out the following regulations, and the management must see that they do so :—

No person shall introduce, keep, prepare, or partake of any food, drink, or tobacco, or remain during meal times in any place in which ground laying or colour dusting is carried on. (Reg. 31 (*a*).)

Every worker for whom milk or cocoa is provided in accordance with Regulation 6, shall drink the same, unless a medical certificate is produced showing cause for exemption from this requirement. (Reg. 31 (*b*).)

Hours of Employment.—(See p. 574.)

Printing.

The only difficulties of a special kind that are to be guarded against in these shops are those relating to temperature. Owing to the temperature at which the mixture of oil and colour used to give the print must be worked, the rooms are apt to become uncomfortably hot in summer time. Although power has been specially reserved to the Secretary of State for the Home Department to permit modification of the temperature limit in these and other workshops, if it should prove to be necessary, it is incumbent on all manufacturers to use the best possible means for ventilating these workshops and keeping the temperature down to reasonable limits. Due attention to methods of extracting the hot, moist air, especially as it rises from the printer's stoves and

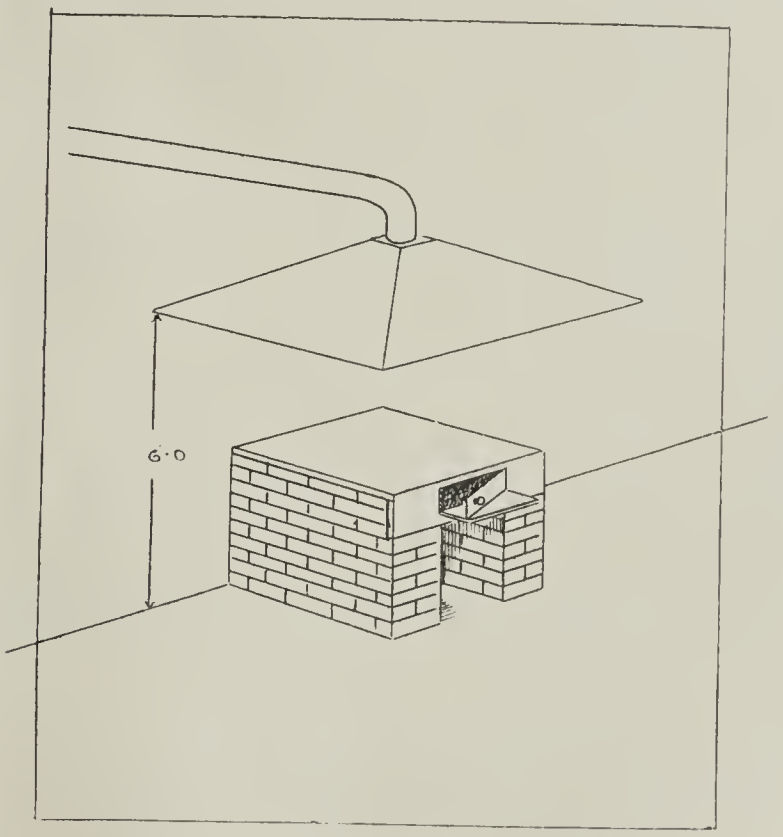


Fig. 5.—Hood over Printer's Stove.

hot plates, and the admission of an ample supply of fresh air by hopper openings arranged as far as possible on the opposite side of the workroom are necessary. In single storey buildings I have found that the placing of a louvre ventilator or a large cowl on the roof, directly over the printer's stove, proves very efficacious, and in other cases a large canopy of sheet zinc may be arranged at a suitable height above the stove so as not to interfere with the work, and connected by a wide duct with the chimney, or taken straight up through the intervening floors and above the roof, where it should be covered with a conical cap or with a cowl to

prevent down draught. I believe it will only be necessary in extreme cases to use an exhaust for the ventilation of printing shops.

Temperature Regulations.—Such a condition of the atmosphere shall be maintained in all workrooms that the reading of the wet-bulb thermometer shall not exceed 70 deg. Fahr., except at such times as the reading of the wet-bulb thermometer in the shade in the open air exceeds 65 deg. Fahr. (Reg. 10 (*a*).)

A thermometer, suitably mounted for observing the wet-bulb reading, shall be provided in every workroom in which any articles are allowed to dry, or in connection with which artificial heat is used in aid of the manufacturing process, whether in the workroom itself or in drying stoves or mangles, or other appliances adjoining the workroom. (Reg. 10 (*b*).)

Wherever steam or hot water pipes pass through a workroom, they shall be efficiently protected, and if not used for the purpose of heating that room, they shall be efficiently covered with non-conducting material. (Reg. 10 (*c*).)

Plucking and Dusting.—In some cases it used to be customary, in order to get a sufficient quantity of over-glaze colour on the ware, to pull the paper transfer from the ware after rubbing it, and then to dust, extra, dry colour on to the oily print with a flock of cotton wool or similar appliance. I believe this process has now been generally abandoned. If it is followed with enamel (on-glaze) colours, it must be considered a lead process, and the workers would come under the special regulations applicable in the case of colour dusters. (See p. 577.) Even then, unless the process were carried on in a portion of the workshop effectively screened off from the rest of the printing shop, all the persons employed in the room would have to be treated as lead workers.

The general regulations as to floors, work benches, and their cleaning, systematic carrying, &c., apply to the printing shops, of course. (See pp. 563 and 565.)

Banding and Lining and Enamel Painting.

These processes if carried out in the usual way are not scheduled lead processes, so that only the general regulations as to floors, work benches, ventilation, systematic carrying, temperature, and cleanliness have to be considered. (See pp. 563 and 565.) It is necessary, however, to draw attention to one special regulation that may be overlooked, yet which is of great importance ;viz. :—

The lawning of dry colours shall not be carried on without the use of an efficient exhaust draught ; except where not more than an ounce is lawned at a time for use in painting. (Reg. 7 (*a* xiv.).)

Hardening Kiln Firemen.

In the ordinary course of their employment these men are only subject to special risk, if, as is sometimes the case, they spend a considerable portion of their working time in putting down their ware on dipping house floors or benches. It will be necessary to consider the special circumstance of each case so as to decide whether, on this account, such a worker should be reckoned as a lead worker, and be subject to the monthly examination or not.

Lithographic Transfer Making.

The process of making and finishing lithographic transfers for use in the decoration of pottery whether carried on in rooms on a pottery works or in a special works for the making of such transfers is subject to the general rules for lead workers as it is included in the Scheduled Load Processes.

Provision must, therefore, be made with regard to general ventilation of such work rooms, the maintenance and cleansing of floors and work benches, overalls and head coverings, the storage and drying of out-door clothing, lavatory and mess rooms, temperature of workshops, medical examination, &c., as with all other departments of a pottery where a scheduled lead process is conducted. (See pp. 573 and 574.)

The making of lithographic transfers, including the wiping off of colour after its application to the surface of the transfer sheets, shall not be carried on without the use of an *efficient exhaust draught.* (Reg. 7 (*a* xviii.).)

The lawning (sieving) of dry colours shall not be carried on without the use of an *efficient exhaust draught.*

Machines used in lithographic transfer making shall not be brushed down, but shall be cleaned either :

(*a*) with moist materials, such as oily rags, in such a manner as not to disperse any dust into the air ; or

(*b*) by means of an exhaust current of air, such as that afforded by a vacuum cleaner. (Reg. 23.)

All pieces of cotton wool or similar materials which have been used in the process of lithographic transfer making shall be kept in a proper receptacle. All pieces of waste cotton wool or similar materials which have been so used shall be immediately burnt. (Reg. 21.)

No person under 16 years of age shall be employed in the process of making lithographic transfers for application to pottery. (Reg. 1 (*b*).)

No person shall be employed in the process of making such lithographic transfers for more than 4½ hours without an interval of at least half an hour for a meal. (Reg. 25 (*a*).)

No woman or young person who is employed in such a process shall be employed in the factory in any capacity for more than 48 hours in any week. (Reg. 25 (*b*).)

A supply of milk, or cocoa made with milk, shall be provided for all women or young persons working in the process of making lithographic transfers who commence work before 9 a.m. Not less than half a pint shall be provided for each such worker at the expense of the occupier. Reg. 6 (1).

Nothing in Regulation 12 or 13 shall be deemed to require the use of moisture in cleaning floors or work benches in lithographic transfer making shops.

Glost Warehouses.

The same regulations as to ventilation, temperature, maintenance and cleaning of floors and work benches that apply to Biscuit Warehouses (p. 572) will apply here.

Similar attention must be paid to young persons or children employed in systematic carrying or lifting work.

No young person or child shall be employed in systematic carrying or lifting work, without a certificate of permission to work, specifying the maximum weight which he or she may carry ; and no young person or child so employed shall be allowed to lift or carry any weight in excess of that named in the certificate. Provided that :

No certificate shall permit the carrying of more than 30 lbs. by anyone under 16 years of age. (Reg. 1 (*c*) and (*c* i.).)

Lavatory Accommodation.

Sufficient lavatory accommodation must be provided for all workers employed in scheduled lead processes, as well as in the process of china scouring and china biscuit emptying (See Schedule of Processes), as follows :—

(*a*) The occupier shall provide and continually maintain, for the use of all persons employed in processes named in the Schedule, at least one lavatory basin for every five such persons. Each basin shall be provided with a waste pipe, and plug, or the basins shall be placed on a trough, fitted with a waste pipe. There shall be a constant supply of hot and cold water laid on to each basin.

(*b*) Or, in the place of basins, the occupier shall provide and maintain troughs of enamel or similar smooth impervious material, in good repair, of a total length of at least 2 ft. for every five persons employed, fitted with waste pipes, and without plugs, with a sufficient supply of warm water constantly available from taps or jets above the trough at intervals of not more than 2 ft. Provided that if the Inspector of Factories for the district certifies that in his opinion it is not reasonably practicable for hot or warm water to be laid on to the lavatories in any factory or in any part of a factory, it shall be deemed to be sufficient if an adequate supply of hot water is provided as near as practicable to such lavatories. The Inspector of Factories for the district shall have the right at any time to cancel or amend any such certificate.

(*c*) The lavatory shall be kept thoroughly cleaned at the cost of the occupier.

(*d*) Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each such person, provided that if the lavatory accommodation specially reserved for such persons exceeds that required by the preceding paragraphs, the time allowance may be proportionately reduced, and that, if there be one basin or 2 ft. of trough for each such person no allowance of time shall be required.

(*e*) The lavatories shall be under cover and shall be fitted up as near as practicable to the places in which the workers for whom they are provided are employed.

(*f*) There shall be in front of each washing basin, or trough, a space for standing room which shall not be less in any direction than 21 in.

(*g*) Sufficient space shall be provided under cover in or adjoining the lavatory for such workers as use the lavatory while awaiting their turn to wash.

(*h*) One roller towel, fastened in position, at least 15 square ft. in area, shall be provided for every three workers and shall be washed or renewed daily.

(*k*) Or, one roller towel, fastened in position, at least 15 square ft. in area, shall be provided for every nine workers, and shall be washed or renewed after every meal-time and at the close of the day's work.

(*l*) Or, a towel at least 5 square ft. in area shall be provided for each worker, and shall be washed or renewed daily ; in this case a peg with the worker's name shall be provided for each towel.

(*m*) One nail brush shall be provided for each basin or every 2 ft. of trough, and shall be maintained in a cleanly and efficient condition. If fastened down it shall be taken up once a week, and cleaned or renewed.

(*n*) A sufficient supply of soap shall be always available at each basin, or every 2 ft. of trough.

(*o*) Separate lavatories for males and females shall be provided. An adjustable wooden partition across a lavatory shall be deemed to be sufficient separation, provided it ensures complete privacy for females while washing. (Reg. 11.)

The provision of hot water, laid on, can generally be made by using some form of geyser or hot water apparatus which can be heated by steam or gas, and where it can actually be laid on there can be no doubt that it is much more satisfactory to do so. It is also most desirable that the lavatory accommodation should be provided as near to the actual work-places as is reasonably possible. Having provided and kept in order such provision, it is then the duty of the Management to see that the workers use the accommodation properly and at all the appointed times.

This washing accommodation shall not be maintained in any mess-room. (Reg. 6 (*g*).)

The Regulations further enjoin on the workpeople the duty of making proper use of the lavatories.

No person employed in any process included in the Schedule shall leave the works or partake of meals without previously and carefully cleaning and washing his or her hands. (Reg. 33 (*a*).)

No person employed shall remove or damage the washing basins or conveniences provided under these Regulations. (Reg. 33 (*b*).)

Food (Mess-Rooms, &c.).

Former codes of Special Rules stipulated that the pottery manufacturer must make certain provision for the taking of meals by the workers employed in scheduled processes. This provision is now demanded for workers in dusty processes in addition, such as those engaged in the process of "towing" or the process of tile-making by the compression of dust, &c. In addition the provision that must be made is much more strictly defined.

(*a*) No person shall be allowed to keep, or prepare, or partake of any food, drink, or tobacco, or to remain during meal times in any place in which is carried on any process included in the Schedule, or the process of towing, or the process of tile-making by the compression of dust, or any other process which the Inspector of Factories for the district shall certify as sufficiently dusty to render the room in which it is carried on an unsuitable place, in his opinion, for persons to remain during meal times.

(*b*) Mess-room accommodation shall be provided for the workers employed in the processes included in the Schedule, and for such others as are excluded from their own work rooms during meal times in pursuance of paragraph (*a*) of this Regulation.

(*c*) This accommodation shall consist of a clean, well-ventilated, and well-lighted room, or rooms, in which no manufacturing process is carried on; it shall be at or near the factory, and shall be sufficiently large to accommodate all the workers employed in the processes included in the Schedule and all others who are excluded from their own work rooms during meal times in pursuance of paragraph (*a*) of this Regulation, allowing floor space in accordance with the following scale:—In mess-rooms for 6 persons and under, 10½ square feet per person; over 6 persons and up to 12, 7½ square feet; and over 12 and up to 20, 6 square feet; over 20 and up to 28, 5½ square feet; over 28 and up to any number, 5 square feet.

(*d*) Provided that if the Inspector of Factories for the district shall certify that in his opinion the special circumstances of any factory are such as to render the provision of mess-room accommodation for all such workers unnecessary, it shall be sufficient to provide accommodation, calculated on the above scale, for such a proportion of all such workers as is named on the certificate of the Inspector; but in no case shall this proportion be less than one-third, subject, in cases of difficulty, to appeal to H.M. Chief Inspector of Factories; and the Inspector for the district shall have the right at any time to cancel or amend any such certificate.

(*e*) All mess-rooms provided in pursuance of this Regulation shall be furnished with proper tables and seats; provisions shall be made for maintaining a proper temperature not below 55 deg. Fahr.; and all mess-rooms shall be thoroughly cleaned daily at the occupier's expense.

(*f*) No person shall be allowed to take into any mess-room any overall, head covering or apron worn in a process included in the Schedule.

(*g*) The washing conveniences prescribed by the Regulation shall not be maintained in any mess-room.

(*h*) A suitable place for the deposit of food shall be provided for each worker using the mess-room. Such provision shall not be made in any room in which a manufacturing process is carried on, and shall be subject in each case to the approval of the Inspector of Factories for the district.

(*k*) Adequate facilities shall be provided to enable workpeople to heat their food.

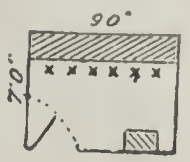
(*l*) A supply of milk, or cocoa made with milk, shall be provided for all women and young persons working in processes included in Part I. of the Schedule, who commence work before 9 a.m. Not less than half a pint shall be provided for each such worker at the expense of the occupier. (Reg. 7.)

Appended is a plan showing how the space can be best utilised.

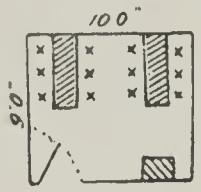
Plans of Mess-Room Seating Accommodation.*

× denotes a seat; ▮ a table; ▨ a place for cupboards, cooking stoves, or other fixtures.

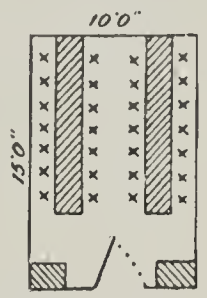
Area	63·0 sq. ft.
Persons	6
Space per person	10·5 sq. ft.



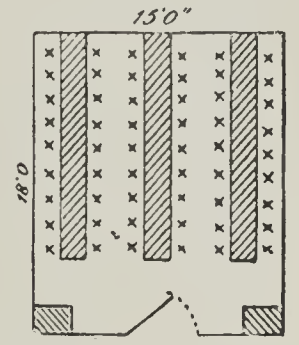
Area	90·0 sq. ft.
Persons	12
Space per person	7·5 sq. ft.



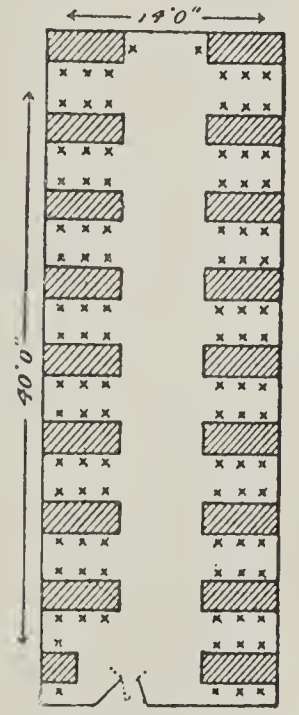
Area	60·0 sq. ft.
Persons	28
Space per person	5·7 sq. ft.



Area	270·0 sq. ft.
Persons	54
Space per person	5·0 sq. ft.



Area	560·0 sq. ft.
Persons	100
Space per person	5·6 sq. ft.



This plan shows one of the mess-rooms at the works of Pilkington's Tile and Pottery Co., Ltd., Clifton Junction, Manchester, which can be inspected by any member of the Joint Committee, by appointment.

Overalls and Head Coverings.

(*a*) The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in the processes included in the Schedule; except that head coverings need not be provided for persons employed in Majolica Painting or Glost Placing.

(*b*) Head coverings shall be adequate to protect the hair from dust, and shall be worn in such a manner as to be effective for this purpose.

(*c*) The occupier shall provide and maintain suitable aprons of a waterproof or similar material which can be sponged daily for all dippers, dippers' assistants, and ware cleaners; provided that, if the front of the overall supplied to any such worker in pursuance of these Regulations is made of material which can

* These suggestive plans are taken from a note by Dr. George Reid, printed in the Appendix to the Report of the Lead Committee (Cd. 5278) 1910.

be sponged daily, no separate apron need be provided for that worker.

(*d*) No person shall be allowed to work in any process included in the Schedule without wearing the above-named overalls and head coverings, as well as aprons when provided in pursuance of the preceding paragraph except that head coverings need not be worn by persons employed in Majolica Painting or Glost Placing.

(*e*) All aprons made of waterproof or similar material, and all overalls or parts of overalls made of such material, shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All other overalls or parts of overalls and all head coverings shall be washed or renewed at least once a week; and the occupier shall provide for washing, renewing, and the necessary repairs of all overalls and head coverings to be done either at the factory or at a laundry; and no worker shall be allowed to take home any overalls, head coverings, or aprons provided in pursuance of these Regulations.

(*f*) All overalls, head coverings and aprons provided in pursuance of these Regulations, when not in use or being washed or repaired, shall be kept in proper custody; for this purpose there shall be provided a cupboard or cupboards or room or rooms suitably situated and sufficiently large to hold the overalls, head coverings, and aprons; a separate peg shall be provided for each worker who is required by these Regulations to wear overalls. (Reg. 4.)

Medical Examination.

(*a*) All persons employed in any process included in Part I. of the Schedule shall be examined once in each calendar month by the *Surgeon*; and all persons included in Part II. of the Schedule shall be examined once in every twelve months by the *Surgeon*.

(*b*) All persons for whom certificates of permission to work are required by Regulation 1 shall be examined by the *Surgeon* within seven days of the commencement of their employment in a process in which such a certificate is required.

(*c*) All young persons and children employed in the carrying of clay, or other systematic carrying or lifting work, shall be re-examined by the *Surgeon* twice in the first period of six months, and once in each period of six months thereafter until they attain the age of 18.

(*d*) Any female examined for employment as a wheel turner shall be presented for re-examination at a later date, if the *Surgeon* considers it necessary.

(*e*) The fees for all medical examinations made in pursuance of these Regulations shall be paid by the employer and shall not be charged to the worker, whether he be in regular or casual employment. Provided that casual workers examined at the *Surgeon's* surgery shall pay 1s. for each certificate entered in the portable register; this fee shall be refunded by the occupier who first employs the worker after such examination; and the occupier shall record in the portable register the fact that the fee has been refunded.

(*f*) A notice shall be affixed in a prominent place in the factory, showing clearly the time appointed for the *Surgeon's* periodical visits; and an amending notice shall be affixed forthwith if it is found necessary to alter that date or hour; wherever possible, not less than three days' notice of a change of date shall be given.

(*g*) A private room shall be provided for all medical examinations. No one shall be present except such other medical man as the *Surgeon* may, with the worker's consent, admit; and in addition in the case of a female any one female relative may be present, or alternatively any one workwoman in the factory approved by the worker and the *Surgeon*.

(*h*) No person after suspension shall be allowed to work in any process in which examination by the *Surgeon* is required by these regulations, without a certificate of permission to work. (Reg. 2.) The *Surgeon* mentioned is the Certifying Factory Surgeon, appointed by the Home Office, for the district in which the factory is situated.

Registers.

(*a*) A register, in the form or forms prescribed, shall be kept, in which the *Surgeon* may enter the dates and results of his visits, the number of persons examined in pursuance of these regulations, and particulars of any directions given by him. This register shall contain a correct list of all persons employed in the processes included in the Schedule, and of all persons for whom a certificate has been obtained in pursuance of Regulation 1; as well as all other particulars required to be entered in the register in pursuance of these regulations.

(*b*) The register shall be open to the inspection of any worker so far as concerns the entries relating to that worker. All such entries as indicate the general health of a worker shall be so expressed as to be readily understood both by occupiers and the person employed.

(*c*) When a certificate of suspension or permission to work is sent by the *Surgeon* to the occupier, it shall be forthwith attached to the register, and shall be kept so attached until replaced by a personal entry by the *Surgeon* in the register.

Entry of Casuals in register. (See p. 576.)

Forms of Register will be issued by the Home Office, and copies may be bought subsequently from the King's Printers.

Restrictions of Employment.

(*a*) No woman, young person or child shall be employed in the following processes:—

(i.) Stopping of biscuit ware with a material which yields to dilute hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described in the definition of low solubility glaze.

(ii.) Weighing out, shovelling, or mixing of unfritted lead compounds in the preparation or manufacture of frits, glazes or colours;

(iii.) Lawning of glaze, except where less than a quart of glaze is lawned at a time for the worker's own use;

(iv.) Preparation or weighing out of flow material containing lead;

(v.) Cleaning as prescribed in Reg. xii., of floors of potters' shops or stoves or any place in which any process included in the Schedule is carried on;

(vi.) Cleaning, as prescribed in Reg. 17, of boards used in the Dipping House, Dippers' Drying Room, Ware Cleaning Room or Glost Placing Shop;

(vii.) Cleaning of mangles or any part thereof;

(viii.) Washing of saggers with a wash which yields to dilute hydrochloric acid more than 5 per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described in the definition of low solubility glaze. (Reg. 1 (*a*).)

See also under Glost Placing, p. 575.

Leadless Glaze Factories.—"Leadless glaze factory" means a factory, the occupier of which has given an undertaking, to the satisfaction of the Chief Inspector of Factories, that none but leadless glaze shall be used therein, and in which none but leadless glaze is in fact used.*

Low Solubility Glaze Factories.—"Low Solubility Glaze Factory" means a factory the occupier of which has given an undertaking, to the satisfaction of the Chief Inspector of Factories, that none but low solubility glaze shall be used therein, and in which none but low solubility glaze is in fact used.*

Affixing of Regulations.

In addition to the printed copies of these Regulations required to be kept posted up, in pursuance of Section 86 of the Factory and Workshop Act, 1901, there shall be kept constantly affixed in every potter's shop and in every place in which any process included in the schedule is carried on, a notice printed in bold type so that it can be easily read, setting forth those portions of the regulations which apply to that particular workplace. (Reg. 26.)

Copies of these notices will be issued by the Home Office, and supplies may be purchased by manufacturers from the King's Printers.

Observance of Regulations.

(*a*) A person or persons shall be appointed who shall see to the observance, throughout the factory, of the regulations, and whose duty it shall be to carry out systematic inspection of the working of all the regulations in the department for which they are individually responsible. The names of the persons so appointed shall be recorded in the register.

(*b*) Each person so appointed shall be a competent person fully conversant with the meaning and application of the regulations in so far as they concern the department for which he is responsible. He shall keep a factory book in which he shall record any breach of regulations, or any failure of the apparatus (fans, &c.) needed for carrying out the provisions, that he may have observed, or that may have been brought to his notice within the preceding 24 hours, together with a statement of the steps then taken to remedy such defects or to prevent the recurrence of such breach. Each entry in such book shall be dated and initialled by the person appointed, who at the end of each week shall make a further entry stating that the inspection required by paragraph (*a*) has been carried out, and that all the defects observed or brought to his notice have been recorded in the book. Such book shall be kept in the factory for at least six months after the latest entry therein.

(*c*) Accurate extracts, clearly and legibly expressed, shall be made of these entries once a week, and signed by the occupier, or someone whom he may appoint, and displayed during the following week in a conspicuous place in the departments to which they refer, and copies of all such extracts shall for the

* Both these classes of factories are allowed extensive exemptions, and abridged placards will be issued by the Home Office embodying these.

same time be displayed in a conspicuous place in the mess rooms. (Reg. 27.)

The Joint Committee strongly urges on every manufacturer the necessity of carrying out these stipulations with regularity and thoroughness. Such a system of self-inspection is the surest guarantee that the true spirit of the Regulations is being observed throughout the factory, and that proper attention is being paid to the specific details laid down.

***Mr. Wm. Burton will be grateful to any reader who will write him at once pointing out any error or anything that is not clear and readily understandable in the above, as it is most important that the reprint should be accurate.

NIGHT LABOUR OF BOYS IN GLASS WORKS.

THE minutes of the evidence given before the Home Office Departmental Committee on the "Night employment of male young persons in factories and workshops" have just been published in the form of a bulky Blue Book. The evidence affecting glass works figures largely, occupying nearly one-half of the useful Trades Index at the end of the volume. Among the gentlemen who were examined were :—Sir Arthur Whitelegge, K.C.B., M.D. [VI.]; Mr. J. A. Hine [IX.], H.M. Inspector of Factories for Northumberland, Durham, and Yorkshire; Mr. G. Bellhouse [VIII.], Inspector for the North-West Division; Mr. A. Dodds [III.], Northern Association of Pressed Glass Manufacturers; Mr. J. J. Hirst [III.], vice-president of the Yorkshire Flint Glass Bottle Manufacturers' Association; Col. W. W. Pilkington [VI.] (Pilkington Bros., Ltd., St. Helens); Mr. W. Bagley [II.] (Bagley & Co., Ltd., Knottingley); Mr. R. Hunter [II.], secretary of the Glass Bottle Makers' Trade Protection Association; Mr. W. J. Asquith [IV.] (Redfearn Bros.); Mr. P. MeLuskey [III.], secretary of the Glass Bottle Makers' Trade Protection Association for the Glasgow district; Mr. W. Bradford [III.], financial secretary to the National Flint Glass Makers' Society of Great Britain and Ireland; Mr. F. Swann [IV.], secretary of the National Glass Bottle Makers' Society of Great Britain and Ireland; Mr. J. Silvers Williams-Thomas [II.] (Stevens & Williams, Ltd., Brierley-hill); Mr. J. Field [I.] (Chance Bros. & Co., Ltd., Birmingham); Mr. T. Melville [II.], general secretary of the Pressed Glass Makers' Society; Mr. N. Halliday [III.], Portobello Glass Bottle Makers' Trade Protection Association; Mr. J. Stokes [VII.], London Glass Blowers' Trade Society; Mr. Wm. Rose [I.] (North & Rose, re china clay); Mr. A. Greenwood [IV.], secretary of the National Federation of Glass Bottle Makers; Mr. C. J. Bishop [III.] (O. & C. Bishop & Co., St. Helens); Dr. W. F. Dearden [V.], medical officer of health, Manchester; Dr. J. Reid [II.], St. Helens; Mr. J. E. Foxon [I.], Glass Bottle Makers' Trade and Benefit Society, Bristol; Mr. C. Powell [I.], Association of Glass Bottle Manufacturers of Great Britain and Ireland; and Miss S. Sanger [XIV.], International Association for Labour Legislation. The approximate number of foolscap pages occupied by each witness's evidence is given in Roman numerals. The total minutes, including the evidence of witnesses for the paper, printing, iron, steel, and artificial silk trades, and several factory inspectors and doctors not named in the above list occupies nearly 270 pages. There are also two short appendices. The first is a letter from the Board of Education, claiming that night labour is likely to interfere with the studies of young persons engaged therein. The second appendix gives a summary of the notes of the proceedings at an interview with the Home Secretary (Mr. Asquith) of a deputation representing the glass trade, on April 30, 1895. The Blue Book contains much valuable information, and several tables giving particulars as to wages and hours of labour. A copy may be inspected by any of our advertisers or subscribers at the office of THE POTTERY GAZETTE.

A study of this evidence helps us to endorse the views of Mr. J. Silvers Williams-Thomas, quoted elsewhere in this issue, and the editorial comment from the "County Express" which we reprint below :—

"There is an impression in the district that the rule affecting boy labour is likely to be altered by raising the age limit of night employment from 14 to 16 years. The grounds for this fear appear to be the receipt by Mr. Husselbee, the secretary of the Glass Makers' Union, of a draft order from the Home Office dealing with the night employment of boys under section 54 of the Factory Act; but as the glass trade comes under section 55 it is hoped that the Home Office proposals do not apply to it, though the fact of such an order being issued shows rather ominously the trend of the departmental mind and has occasioned not a little alarm in glass-making circles. Under this order, while boy labour at night will not be abolished, it will be accompanied by two restrictions which will have to receive the very careful consideration of the glass trade if time proves them to be applicable to it. The first is that boys employed at night shall be examined at the employers' expense by the factory surgeon each half-year, and although this may appear to be unnecessary and irksome, no great amount of objection is likely to be raised against it. But the second proposal, if it is ever imposed on the flint glass trade, will mean a crippling of the industry to a degree which will seriously endanger the whole trade. It is that no boys shall be allowed to work in the glass house under 16 years of age. At the present time the age limit is 14, and this enables the glass manufacturer to engage likely boys for his trade as they leave school; the material may in one sense be 'raw,' but it is plastic, and this is a quality which is of the highest importance in an industry where artistic ability and manual dexterity are primary considerations. If the flint glass trade as a whole cannot take a boy into its houses till he has left school two or three years, what chance will the trade have of recruiting its ranks? And what chance will the boys have? The glass trade is not as other trades. The success of the workman in after life depends entirely upon that delicacy of touch and precision of eye which only come from early acquaintance with the practical work of the glass house, and employers and men alike agree that if the experience of the first early years is missed, there is nothing which can replace it, and a late beginning, such as seems to be in the minds of the Government, handicaps a man from the commencement of his career. The whole question is one which affects both manufacturers and men, though it affects the workmen of the trade if possible more than the employers. The latter are obliged by reason of the nature of their business to keep their glass houses at work all round the clock, but the workmen have to rely upon the assistance of the boys, and without them not only would the output of work be seriously handicapped, but the future artisans of the trade would be drawn from the failures at other occupations instead of from the ranks of those who would become a credit to an industry which is the pride of England and of this district. If a boy cannot enter the flint glass trade until he is 16, it follows that he must either have been doing nothing or have been engaged at some other occupation for two years. If he has been doing nothing, it is not likely that he will be wanted; if he has been at some other occupation, he will most likely be one of the non-successes of life or he would have settled down and become useful. In either case it means that there will be placed upon the recruiting for the glass trade a limitation which cannot help having a deleterious effect upon the industry and also upon the hundreds of cutters, engravers, and others whose work depends entirely upon the prosperity of the flint glass trade."

Fragments.

¶ One of our newest advertisers writes :—" I am pleased to say that we have obtained up to the present good results from this advertisement. You can quote this fact in your paper if you like."

* * *

¶ The proposed U.S. tariff reductions and the accompanying imposition of an income tax (p. 525) suggests the epigram : When duties go out of fashion then income taxes.

* * *

¶ Our extension of operations in the United States will help our advertisers to reap the full benefit of any advantage offered to them by the revision of the tariff.

* * *

¶ Our Correspondence columns (p. 548) show that railing at the railways is evidently still prevalent in the pottery trade, and not without good cause.

* * *

¶ If glass manufacturers were to employ the Home Office phraseology that refers to boys as " male young persons," they would no doubt style the would-be regulators of boys' night labour as " female elderly persons."

* * *

¶ A well-known London agent remarked to us recently :—" How strange it is that when a customer is advised that a representative is calling, the said customer has the goods of that firm so well displayed on that occasion.

* * *

¶ From the same source comes the query, " Why do not the pottery manufacturers originate, instead of acting like a flock of sheep and copying one another ? " If this hurts the feelings of anyone in the trade, we would remind him that, " Faithful are the wounds of a friend."

* * *

¶ At a supposed " suffragette " fire which occurred during April at an unoccupied house in the Hampstead Garden Suburb, a large wooden crate containing ornamental tiles, deposited in the dining-room, was found to be alight, but the flames were soon extinguished. Having done so much for the glass trade, the militants apparently wanted to give the potters a turn.

* * *

¶ Their Majesties when visiting the Potteries did not, of course, experience any of the joking that is practised on less august visitors to certain factories. At the Sèvres Pottery works (writes a correspondent of " The Manchester Guardian ") with two other simple tourists I had strolled round the place, led by an imposing official, and had asked the price of one or two pieces of china in the showrooms—where I left them, when the price was mentioned. In one of the workrooms a husky, genial potter, in a white apron, demonstrated, among other things, the making of egg-shell china cups. A sort of cream of white clay was poured into an absorbent mould until a mere film of it was deposited, and then the rest of the cream was poured off. When the film dried, the skilful potter extracted it from the mould and handed it casually over to one of my friends. He took it, and it crumbled to fragments at his lightest touch. Impressed as we had been by the expensiveness of Sèvres, we had a shocked feeling that this accident would cost us something heavy. But the potter and the attendant laughed joyously at our horror. The joke was evidently a stock one.

" CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

ALL trade and industrial questions have been overshadowed by the Royal visit, and the signal honour paid to the potting industry by the King and Queen. At other times the serious falling off in most departments of the home trade and the unfortunate sectional strikes would have closely occupied the attention of business men, but this month everyone has been concerned with their Majesties' tour. Those whose factories have been visited have been closely occupied with the preparation of their works, and many others have devoted much time and trouble to their exhibits for the great display of modern ware at the King's Hall, Stoke. Nevertheless, the state of business must demand serious attention before long. The general opinion is that the home trade is in a bad way, and it does appear that the prophets who have predicted the end of the boom are not far from accurate in their prophesies. This continued stagnation in demand seems to apply to most departments of the earthenware and china trade, and I hear of factories that have been running on short time for six weeks. The millers are recording exceedingly limited orders for materials, and one whom I met the other day had closed, for the time being, one of his two mills. Of course, this short time is not general, and many of the largest manufacturers, particularly those having a considerable foreign as well as home trade, are still very busy and have plenty of orders on their books. The jet and rockingham trade has been quite disorganised this month by the strike, which I will refer to later.

Some incidents of the Royal visit, which is dealt with at length elsewhere in this issue, may be included in hese notes, as the writer was one of the limited number of journalists, representing the newspapers of the country, who were selected to accompany their Majesties throughout their tour. Many may have imagined that the inspections by the King and Queen would be very perfunctory, but they were not. The King displayed the keenest desire for knowledge of the technical and mechanical departments of manufacture ; and the Queen, who is quite a connoisseur of pottery, took the greatest interest in styles of decoration and in periods of manufacture. Her Majesty, too, displayed an exquisite taste. I have indicated that His Majesty's desire was chiefly to know the why and wherefore of various details in the course of manufacture, and this statement is well exemplified by his investigations at Copeland & Sons' works. His Majesty was quite absorbed in the technique of firing a biscuit oven, and specially inquired as to the question of contraction during firing. This being a china oven, the King was naturally informed that it was very considerable. Then at the glost oven he was greatly interested in the stilt and spur contrivances for preventing the glazed ware becoming " glued " together. I am not suggesting that His Majesty was not interested in the artistic side of the craft ; he certainly was, but I give these little incidents to show that his leaning was obviously more to technical and mechanical details.

At the works of Mintons, Ltd., there was a charming incident, the King and Queen heartily shaking hands with three old employees. Thomas Hopwood is 76 years of age, and hearing that he had been working there for 65 years, the King remarked " I am glad to see you looking so hearty, I trust you will be working here for many years yet." The other two veterans were Mrs. Sarah Ann Beard, who is 82 years of age, and who worked for Messrs. Mintons for 65 years ; and Mrs. Mary Hall, aged 72, who after 63 years' service, is still engaged in "looking over." At Minton, Hollins & Co.'s works the Queen was greatly interested in the work of " tube line " decoration, and quite spontaneously exclaimed : " Oh, let me try that." The girl decorator very readily responded, as may be imagined, and taking the " squeegee," Her Majesty, after some initial difficulty, which caused her to observe that it was not so easy as it appeared, succeeded admirably in tracing the ornament in lines of slip. The problem of potters' count caused the King much amusement at Messrs. Ridgeways. On being told by a young girl decorator that there were 30 to the dozen, His Majesty laughed heartily. " Thirty ! " he exclaimed, " I have heard of a baker's dozen, but never of 30 to the dozen." The King was obviously amused, and he argued the question out until he had solved the mystery of a " dozen," which may number, according to the piece of ware, anything from one to 72.

In the course of the second day's tour, their Majesties visited the historic factory of Josiah Wedgwood & Sons, Ltd., at Etruria, and were vastly interested in the work they saw proceeding in the jasper shops—original parts of the factory. They saw the throwing process in the room where the great Josiah threw the first six vases made on the Etruria works, and they watched with much interest the ornamenting of the jasper with white reliefs in the very room in which a hundred and fifty years ago Flaxman himself carried out some of his exquisite modelling. In the Wedgwood Museum the Queen again displayed her connoisseur knowledge in examining the many examples of historic importance which are housed there. At Messrs. Doulton's works, their Majesties confined their attention to the showrooms and a studio, where the firm's chief artists were working. They examined almost every class of the firm's varied and artistic productions, the Queen chatting to Mr. J. C. Bailey, the managing director, and expressing her admiration for one after another of the firm's wares. In the studio the artists' work and studies were very interestedly examined. Messrs. Alfred Meakin's factory, at Tunstall, was the last to be visited, and in the decorating shop some 200 girl and women employees rose en masse and sang the National Anthem.

The King and Queen have expressed their delight at the enthusiastic reception accorded them on every hand and the pleasure they have derived from their inspection of the industries. The effect on the potting trade of the district of this signal favour must prove very beneficial. The making of pottery and the quality of Staffordshire wares have never before been brought so prominently before the country, and the industry must inevitably benefit. One of the great features of the event has been the fact that the visit has inspired manufacturers to bring together their wares in one great exhibition. Everyone agrees that never before has there been such a display of modern pottery in this country, and the same remark applies to the collection of seventeenth and eighteenth century Staffordshire wares. Up to the evening of April 23 the attendance was upwards of 4,000, much larger than was anticipated, and a wider public will now have the opportunity of inspecting the exhibition, for it is to be on show at Harrod's Stores, London, for ten days from April 30.

To return to questions as to the state of trade, the falling off in demand is making the high cost of production felt very keenly, and the heaviest item in that cost is without doubt in respect of coal. The past month has seen another increase of 5 per cent. in miners' wages, and it is feared that on new contracts this will entail another 6d. per ton. Manufacturers are, indeed, alarmed at the prospect, and the Manufacturers' Joint Committee has addressed a communication to the North Staffordshire Coal Owners' Association asking that body to receive a deputation of pottery manufacturers "to discuss the disastrous effect which the present high price of fuel is having upon the potting industry of the district." It is, of course, desired that the coal owners may see their way to grant some relief to manufacturers, but seeing that every 5 per cent. advance in miners' wages has resulted in an increase of 6d. per ton on the price of coal, the prospect of deviation from this custom is remote. Looking at the matter from the consumers' and not the miners' point of view, the only satisfactory feature is that their wages have now reached the maximum of 65 per cent. over the 1888 basis, and so no more advance can be secured during the life of the existing agreement.

The export trade, generally speaking, is much more satisfactory than the home, but there is not that briskness that obtained a few months ago. The feature of the month in this connection is in regard to the American tariff question. When the Bill was introduced at the extra Session of the United States Congress, various messages arrived from the press correspondents, but no one was able to arrive at an accurate conclusion as to their meaning in regard to pottery. Only two or three days ago I was talking with a number of manufacturers, and without exception they were at a loss to know what was meant. Now, however, I have seen the official text of the Bill so far as it relates to pottery, and the excellent prospect of reduction which it foreshadows will be good news to many. Last month I gave a forecast and indicated that the reduction would almost certainly be on earthenware and not on china, and my prediction—based on an excellent source of information—has proved to be accurate. China, decorated and undecorated, is reduced only 5 per cent.—practically nothing. Earthenware, decorated and undecorated, is reduced 20 per cent.—a great decrease, which will mean much to English exporters of earthenware and semi-porcelain. I say "is reduced," but, of course, the Bill has to be passed, and in the meantime some of the American potters are to put up a big fight against the proposed decrease of the tariff. The object of the drop in earthenware and not in china is exactly as I explained last month. The American potters are chiefly afraid of the competition of German and French china. They do not fear the English competition so much, because it is fair and above board.

I quote here a summary of the Tariff Bill provisions, which will prove interesting :—

China and porcelain wares and all bisque and parian wares, undecorated, 50 per cent. ad valorem (present rate 55 per cent.).

Ditto, decorated, 55 per cent. (present rate 60 per cent.).

Earthenware and crockery ware, including white granite and semi-porcelain earthenware, undecorated, 35 per cent. (present rate 55 per cent.).

Ditto, decorated, 40 per cent. (present rate 60 per cent.).

Common yellow, brown or grey earthenware, common salt-glazed stoneware, stoneware and earthenware crucibles, undecorated, 15 per cent. (present rate 25 per cent.).

Ditto, ornamented, incised or decorated in any manner, 20 per cent.

Rockingham, 30 per cent. (present rate 40 per cent.).

With regard to the labour disputes, it was briefly explained last month that three sectional strikes had begun. The least serious of these was that connected with two tile works at Tunstall and Cobridge, where the tile-makers and majolica paintresses were resisting the firms' notices of reduction in prices, though some notices had also been given by the operatives themselves. During the progress of this strike there were some lively scenes at Tunstall, the strikers objecting to the employment of certain new hands who had been engaged to do some of the work of those who had left their employment. There was no actual violence, but for one night, owing to the demonstrations of the strikers, it was deemed wise to house the new hands on the factory. One woman who was particularly anxious to return to her home, however, escaped the vigilance of the demonstrators by being disguised in a policeman's helmet and great coat. On April 14, after rather more than a fortnight's stoppage, the strike was settled by both parties to the dispute withdrawing their notices. The strike in the cane-and-white department of the sanitary trade, involving 100 operatives, was still continuing on April 24, and likewise that in the jet and rockingham trade, where 500 to 600 hands are concerned, and which is having a very serious effect on the factories engaged in that trade. In both cases the operatives are demanding higher rates of pay. Added to these troubles, a strike of marl workers has occurred, and should it long continue, it will have the effect of almost stopping some manufactories, owing to the shortage of sagger marl and wad clay.

The Central School of Science and Technology is expected to be completed at the beginning of September—the imposing building is already roofed—and the administrative machinery is being put into operation. The first formal meeting of the governors of the new school, who include representatives of the pottery and mining industry, in addition to members of the Stoke-on-Trent and Staffordshire Education Committees, was held on April 16, when Alderman Philip Elliott was appointed Chairman and Mr. T. W. Bratton vice-chairman. The former is the chairman of the Stoke-on-Trent Education Committee and the latter of the Higher Education Sub-Committee ; and both of them are and have long been keenly interested in the new school. The governors wisely decided to retain the assistance of the two Advisory Committees, representing the pottery and mining industries, and these bodies will in future report to the governors. The intention, of course, is to open the institution in time for the next session, and a sub-committee was appointed to invite some prominent educationist to perform the opening ceremony. In this connection, I have heard mention of two names—those of Lord Rosebery and Lord Haldane. The governors spent some time on the discussion of the staffing question. With regard to the pottery school and the proposal to appoint a lecturer in physics, Dr. Mellor (the principal) said that if one who was only an expert in physics were appointed, he (the new lecturer) would have a difficult task before him, because it would be some years before advanced physics could be taught in the district ; there had been practically none taught as yet. So far as potting was concerned, the student wanted a good knowledge of heat, but the subjects of light and sound were unnecessary. The subjects of electricity and machinery were, however, important, and so he thought it might be best to engage a lecturer who was not necessarily a specialist in physics, but in the mechanical side. Mr. F. H. Wedgwood said the school had been provided on the assumption that they would have, not only a specialist in chemistry, but also in physics. If they provided the teachers, the students would come. The matter was referred to a sub-committee.

The financial estimates for the year 1913-14 were submitted, and in regard to the pottery school it was calculated that the expenditure would amount to £1,602 10s., as against £773 17s. 1d. in 1912-13 ; £706 19s. 11d. in 1911-12 ; and £791 10s. 10d. in 1910-11. It was estimated that the net expenditure for the ensuing year, after allowing for Board of Education grants, fees, &c., would be £1,425. With regard to the mining school, the net estimated expenditure for the coming year was £959 10s. This expenditure will be met, as to two-thirds by the Stoke-on-Trent Education Committee,

and as to the remaining third by the County Education Committee, and it was decided to issue precepts accordingly. The offer of W. Boulton, Ltd., of Burslem, to present pottery machinery to the school to the value of £60 was accepted with thanks, as also was the offer of a money prize of five guineas from the Institute of Clay Workers. The high reputation of the Stoke-on-Trent Pottery School has been long acknowledged in this country, but its fame is evidently extending to all parts of the world, for the Chairman reported to the governors that a request for admission to the pottery laboratory had been received from a Russian student, and a similar request from a Japanese student. The present accommodation, however, is insufficient for local requirements, so naturally the applications of foreign students could not be considered.

During the month the Joint Committee of Pottery Manufacturers has been actively engaged in studying the new Special Rules, and to good purpose. The analysis of the rules by Mr. Wm. Burton, published in this number, and later to be issued in book form, should be very helpful to the manufacturers who study it. The Joint Committee are also arranging for a special exhibition of apparatus which can be used in carrying out the rules. This exhibition is to be held in the King's Hall, Stoke-on-Trent, from June 9 to June 21 inclusive, and should afford a good opportunity for makers of such appliances to bring their specialities before the notice of the potters to their ultimate mutual benefit.

An efficient and adequate electricity supply is a present-day essential for a commercial community, and particularly so in the Potteries, where electrical motive power is being more and more applied to the factories. It is therefore interesting to note that during the month the new central power station at Hanley has been opened, and the new system of electricity supply for the whole federated borough of Stoke-on-Trent inaugurated. The ceremony, which took place on April 10, was an interesting one, Alderman H. Leese (Chairman of the Electricity Supply Committee) formally opening the buildings, the Mayoress (Miss Geen) turning on the steam to the new turbines, and members of the Electricity Committee switching the current on to the works, the sub-stations, &c. The new scheme of electricity supply, which entails an expenditure of £60,000, is essentially the outcome of the federation of the Potteries. Soon after the accomplishment of that event it became obvious that the existing works at Hanley, Burslem, Stoke and Longton were inadequate. The Borough electrical engineer and his committee came to the conclusion that an entirely new system was essential, inasmuch as the existing types of supply were not uniform. It was accordingly recommended that the Corporation should adopt a scheme following on the successful practice of a number of the larger towns, and eventually in 1911 the Council approved a new system of supply on the extra high tension three-phase alternating principle. This involved the erection of a new contral power station at Hanley on land near the Park and the adaptation of the existing stations at Hanley, Burslem, Stoke and Longton as sub-stations for the conversion and distribution of the current.

The new plant consists of two 1,500 kilowatt turbo-generating sets, together with the necessary boilers and accessories. The intention is to use the existing direct current plant at Burslem and Stoke and the single-phase alternating current plant at the old Hanley works, so long as it is economical to do so, and to supplement it with power in bulk from the new power-house. The four existing works have, therefore, been equipped with rotary or motor converters for the direct current and motor generators for the alternating current systems. During heavy loads the local steam plant will assist the new power-house, and on light loads the supply will be taken in bulk from the latter. The plant is of the latest types, and the new generating station is designed to economise labour and to simplify the system of supply. The steam turbines are of the Howden-Zoelly type, and the turbo-alternators are of the rotating field type, and totally enclosed. There are three Stirling boilers, two in battery, and one as a single unit. Each has heating surface of 4,096 square feet, and suitable for working at 200 lb. per square inch pressure. The sub-station plant consists of two 600 kilowatt rotaries with exciters, boosters and starting motors at the Burslem works, two 500 kilowatt La Cour motor converters at the Stoke works, two 300 kilowatt simple rotaries at the Longton works, and two 600 kilowatt motor generators at the old Hanley works. With this new and adequate system it is hoped that some of the large manufacturers will take a direct supply from the Corporation high tension mains.

As recorded last month, the death occurred on March 27, under particularly sad circumstances, of Captain Victor Henry Goss, of the firm of W. H. Goss, Stoke. Riding to business, he was thrown from his horse and died a few hours later. Captain Goss was highly esteemed and respected, not only by a wide circle of business friends, but also by the local Territorials, of which he was a most popular officer. He had also seen service in the South African War. It was, therefore, only fitting that the tribute of a military funeral should be paid to him. The obsequies, which took place on March 31, were indeed very impressive.——At Elstree, Herts, on April 24, Mr. J. Hamilton Fleming, of Barlaston, the younger son of Sir Jas. Fleming, of Rutherglen, was married to Miss Helen Josephine Chatto, of Hillside, Elstree, elder daughter of Mr. T. Chatto, publisher. The Rev. T. Eales, rector of Elstree, officiated, with the assistance of the Rev. D. R. Norman, of Lichfield. The presents to the bridegroom included handsome gifts from the staff and workpeople of the Woodland Pottery.

THE STOURBRIDGE, BIRMINGHAM, AND NORTH OF ENGLAND GLASS TRADES.

(FROM OUR OWN CORRESPONDENT.)

DURING the last two months there has been a fair amount of briskness amongst the glass manufacturers of Stourbridge and Wordsley, and present prospects, though they cannot be reported as by any means brilliant, are held to be favourable on the whole. But a little uneasiness is caused in some quarters by the changes to be brought about through the fiscal policy of the Government of the United States, as propounded by the new President, Mr. Wilson. The feeling indicated is not based on good grounds. It is far from likely that American glass will be sent to Great Britain in very large quantities, for it would have to meet not only the competition of British firms, but that of European countries whose goods we import. On the other hand, the contemplated great reduction of the hitherto almost prohibitive tariff on imported glass in the United States may enable the leading firms of glass manufacturers in Stourbridge, celebrated for the beauty and general excellence of the wares they produce, to obtain a footing in such cities as Washington, New York, Boston, and others that might be named. A quarter of a century ago, and further back, the chief American dealers were in the habit of coming over—some of them annually—to make selections of high-class table ware, &c., from the stocks of manufacturers in Stourbridge and Birmingham, but that custom or habit has long ceased. Whether any British glass of the best quality was exported to the United States last year, or in that preceding, is extremely doubtful; the tariff proved a bar, if nothing else did. The production of flint and other glass in the States, protected against all oversea competition, as the manufacturers were, led to the industry getting on a firm footing, and it is a fact that will not be denied, that some of our finest workmen from the glasshouse, the engraving bench, and the cutting shop, were induced, years ago, by the temptation of specially high wages, to go to America and train young workmen. Both from Birmingham and Stourbridge skilled artisans went, also a few from Manchester, and the quality of the glass produced there, it must be confessed, has reached a good standard.

In Stourbridge, work of the highest class keeps in demand, and much of it is exported not only to the Continent, but to Canada and Australia. The home requirements are fairly well met, both in flint and mule tableware, and in pressed work also. London continues to be a good market for these articles, and for fancy glass in flower stands and the like. In the provinces there is hardly as much call for dishes, tumblers and sugars as there was three months ago, but signs of a revival are not wanting. Much interest is felt just now in the proposed regulation by Government of boy labour at night. It is hoped that nothing will be done to hamper an industry which has already suffered severely from a restricted supply of labour.

The flint glass trade in Birmingham is in a fairly healthy condition, and at the time of writing, although the spring has been backward, there is a good demand for fancy

flower vases. The new designs are very taking, and show much skill not only in the fashioning of the several articles but in the arrangement of colours. This branch of business is in increasing favour as the season comes round, and is largely due to the taste displayed in the manufacture of the vases, &c. The better qualities of table glass are selling well on the whole, and very fine examples of skill in cutting and engraving are to be seen in the leading shops of the city devoted to this department of the flint glass trade. Pure crystal in colour, and the cutting exceptionally good, the articles shown, consisting of wines, champagnes, cruets, liqueur bottles, decanters, and dishes, as well as epergnes, attract great attention. A few Midland firms of the highest repute have brought out suites—jugs, spirit and other bottles, wines, and clarets, &c.—to sell at prices from two or three pounds up to ten and twelve pounds, and even more. One of the finest sets we viewed the other week was remarkable not only for the purity of the metal, a merit which goes without saying, but for the brilliant cutting, the facets in the pattern adopted reflecting the light like hundreds of diamonds. It is said that one firm of manufacturers are doing well in richly cut glass with Continental houses, and claim to be successfully meeting foreign competition in that particular line. Something is being done in renewing old efforts to apply the cutter's wheel to the patterns on certain blown (moulded) goods, and there is a sanguine feeling as to success. A difficulty that faces the spirited enterprise lies in the pattern showing itself internally as well as externally, and so hindering to some extent cleaning operations. Vast quantities of foreign glass continue to be poured into Birmingham, as into other large business centres, and in the case of the city, not only for sale in the retail shops, but to the order of silversmiths and electro-plate manufacturers, firms that employ their own cutters and engravers, who operate on the articles, chiefly small in size, which reach them almost direct from the annealing oven.

The glass trades of Lancashire embrace a great variety of articles, as they do in the Midlands, and of late, through activity in the shipbuilding yards, there has been a brisk demand for lenses and deck-lights, a demand not yet satisfied ; and railway companies, both home and Colonial, are customers for carriage lamps and other goods in glassware. It is not a far cry to Bristol, and we may quote a sentence from the Year Book, just issued, of the city's Chamber of Commerce and Shipping, viz. :—"If the famous glasshouses are much fewer in number than a century ago, and Champion's beautiful china is reserved for rich collectors, we have still a creditable show of quaint brick cones in the manufacturing part of the city, and our bottles and pots and pans, and cups and saucers, are neither mean in make nor unimportant in output."

In Lancashire, as in other parts of the United Kingdom where glass was manufactured in days of old, it is the case, as in Bristol, that there are fewer "quaint brick cones." In Warrington, though, at Bank Quay, the manufacture of glass is still carried on, much skill and enterprise being exhibited by the proprietors. Manchester flint glass manufacturers, the few left, are fairly well employed in the table trade, both pressers and cutters being busy, and the future, so far as the summer season is concerned, is regarded as promising. Some of the bottle makers are not very full of orders. One firm has closed down a beehive furnace temporarily, orders for bottles by patent medicine wholesalers not being up to the usual standard so far as numbers are concerned. There is an opinion that the National Insurance Act is detrimentally affecting this branch of the glass trade. In two other bottle works in the city, the men went out on strike, a demand for an increase of wages having been refused. After the lapse of a fortnight one firm gave way, and the hands returned to their employment ; but the other, the larger establishment, took a different course—they are extending their premises with the view to the installation of machines similar to those in use in West and South Yorkshire, in order that they may be enabled to make bottles and jars with the aid of unskilled labour. The men on strike show no signs of giving way, and several of them have left Manchester and got jobs elsewhere. Tubing for steam gauges, &c., keeps in demand, and prices are more firm than was the case some months ago. For machinery glass the demand is brisk, though it is affected adversely to some extent by the war in the Balkans. At St. Helens, the production of plate-glass goes forward briskly, and is said to have had a little stimulation through the outrageous doings of the Suffragettes in London. More benefit, however, has resulted from the expansion of the motor-car industry, the demand for glass for wind-screens, &c., having increased. The export branch keeps up well, and this applies to sheet-glass also. Flatteners, though not reported brisk, are doing fairly well, as also are plate-glass benders. Bottle makers are working full time, as usual, but are not so "flush" as they were a year ago. The prevailing cold weather has had a detrimental effect on the demand for "minerals," and stocks are reported as somewhat larger than is generally the case at this season of the year ; but if fine warm weather sets in the goods in hand will be quickly reduced through the fulfilment of the orders of aerated water manufacturers. Liverpool beer-bottlers will also operate with more freedom than they are doing at present, and that will give a fillip to business in the St. Helens works. A movement in the bottle trade—the creation of a great combine—has attracted much attention. This is the United Glass-Bottle Manufacturers, Ltd., and is referred to a little lower down.

Although employment is pretty good in the glass-bottle trade of West and South Yorkshire, it has fallen off to some extent in the mineral water branch through the cold and unpropitious weather this spring. Manufacturers of soda-water and lemonade, &c., were prepared a couple of months ago to place large orders for bottles, but for the reason stated they felt compelled to hold their hands to a great extent. A similar state of things has existed among ale and stout bottlers. Stocks of bottles in makers' hands are increasing, but not to an alarming extent, and when settled warm weather sets in there will be a great demand for all classes of bottles and a rapid supply from the warehouses. A good number of flint syphons have been manufactured, but for flint medicals there has not been as active a demand as had been expected, yet the output has been, and still is, fairly large. At Castleford, a moderate amount of large work in carboys, &c., has been produced, as in a few other centres. The Stairfoot (Barnsley) works continue steadily employed, and the same is the case at Knottingley, Hunslet and Thornhill Lees.

The works situated in this suburb of Dewsbury were the scene the other week of an interesting event, Mr. Jos. Blacker, one of the foremen, being presented with a gold-mounted walking stick by his fellow workmen in recognition of the fact that he had completed fifty years' service with the firm, Kilner Bros. It transpired during the ceremony that Mr. Blacker had been endowed with wonderfully good health, for during the half-century he had only been away from his employment one month through illness. On the 3rd ult. Mr. Caleb Kilner, managing director of the extensive glassworks, celebrated his 70th birthday, and in a manner most agreeable to all the employees ; each was presented with a day's pay. A matter of much more importance has been the formation

of a huge limited liability company, composed of some of the largest and most influential bottle-glass manufacturers in Great Britain. The company was registered early last month with a capital of £600,000, to acquire the businesses of Nuttall & Co., Ltd., and Cannington, Shaw & Co., Ltd., St. Helens; also the businesses of G. E. Alexander and E. Alexander, as carried on at Hunslet, Blaydon-on-Tyne, and Southwick-on-Tyne, and those of Robt. Candlish & Son, Ltd., Seaham Harbour. The bottle trade in all its branches, it is expected, will be strengthened by the establishment of this great company.

The glass trade in the city of York keeps up well, there being briskness in the flint houses and a moderate demand for goods in the bottle branch, medicals being in fair request. For mineral water bottles there was not a strong call, owing to the cold weather. Best table glass keeps in favour, and cutters are well employed. In pressed goods there is no change of moment to report, but the trade generally is in a healthy condition.

Further north, in the Wear district, the glass bottle trade has fared pretty well, and in the closing weeks of last month was brisk. This was the case certainly at Seaham Harbour, as well as Sunderland, in which latter town the production of pressed tumblers, dishes, &c., was about an average for the season. At Newcastle-on-Tyne the glass houses have a moderate run in the cheaper lines in table-ware, competing as they do with imports from Sweden, Belgium, and other countries on the Continent. Cutters have only had moderate employment during the last two months. Prospects for the summer are considered fairly satisfactory all round.

The formation of the great limited liability company has naturally excited much attention amongst the operative bottle-makers of all ranks, and especially in Lancashire, where leading members of their trade union are reported to be seriously considering the establishment of a limited company, the shareholders in which shall be composed of workers only These officials fear, and the feeling is shared by others, that the new combine may devote themselves to the further use of machines for the production of glass bottles, manipulated by unskilled labourers at low wages. Although up to the present time nothing definite has been decided upon, it is understood that a general conference of the trade will be held to consider what shall be done. Some of the more thoughtful men, not holding any office in the union, are inclined to the belief that the competition which must ensue between the workers' firm and those of the employers, combined and uncombined, will inevitably bring down the selling prices of bottles, jars, and syphons, and that wages must necessarily be reduced. That remains to be seen. In the meantime much will depend upon the way in which the new company carries on business. It certainly will maintain present rates if possible, and under which the men round the furnaces and tanks are getting high wages.

THE CORNISH CHINA CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

AS the date of the adjourned meeting of the St. Austell and district China Clay Workers' Union approaches, the anxiety of those who are averse to any semblance of an industrial war becomes perceptible. The down-tools policy which has been advocated largely by an irresponsible section of the workers will have a serious result, and the local organiser expresses the opinion that a strike is inevitable. As I have said before, there are several firms whose amicable relations with their employees are such that, whatever the result of the meeting may be, those works will remain unaffected.

During the past month much sympathy has been expressed with Mr. John Hooper, a well-known china clay merchant at St. Dennis, in the death of his eldest son. Mr. Willie Hooper, as he was so familiarly known, was an assistant manager of the great Anchor China Clay Works in the parish of St. Enoder, and was highly esteemed.

There has been no apparent abatement in the unprecedented activity of the Cornish china clay industry during the past month, but the demand has rather had the tendency to increase the anxiety of the china clay merchants, on account of their inability to fulfil their existing contracts. I understand that H. D. Pochin & Co., Ltd., who were very large buyers of china clay as well as large producers, have acquired the Park China Clay Works at St. Neot, near Liskeard, quite recently, in order to meet the requirements of their extensive chemical manufactories and other purposes. At their already expansive works at Gothers, St. Dennis, another long kiln is in course of erection, and they are installing a gas winding engine. In addition to this, H. D. Pochin & Co., Ltd., with commendable enterprising spirit, have taken over the Lewidden China Clay Works, near St. Just, about six miles west of Penzance.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

REPORTS from the retail merchants here are this month rather more cheerful than has been the case of late. All through the month which has elapsed since the last date of writing the weather conditions have been fairly seasonable, except that perhaps the cold has been more pronounced than is desirable. There has been a fair amount of fine weather all through, and during the past week the temperature has become a good deal less bracing, with more of the mellowness of spring. Shopping all over our trades during the first months of the year had run into arrears, owing to the sustained inclemency of the weather, so that during the past month, with improved conditions on the whole very well kept up, the counter trade of the retail houses throughout Scotland has been fairly good, not to say active. Buyers by this time have had their minds accustomed to the higher prices demanded for all classes of pottery and glass goods, and these advances no longer act as hindrances, where there is any real necessity for restocking the household furnishings of fragile ware.

The wholesale merchants and their country travellers (town travellers as well), as already noted in last issue of the GAZETTE in this column, had a fairly good and, indeed, rather encouraging experience during March in the orders lifted on the roads, and otherwise sent in to the wholesale emporiums. This was confidently expected to continue during the course of April as well, but, from whatever cause, disappointment has fallen in instead. Orders have not been coming in with anything like the freedom characteristic of March, and this experience, we understand, has been general all over. After all, it is likely that during March and early April stocks in retailers' hands had become fairly well filled up, with the natural result of a curtailing in the placing of additional commissions. If this be the case, and considering the comparative activity in the retail counter trade during April, as noted above, the next month, May, may introduce a change the other way, with a return of freedom in the placing of orders—to the renewed encouragement of travellers on the roads and their principals at headquarters.

The pottery proprietors throughout Scotland have for a long time been comparatively free of trouble arising out of disputes about wages with their workers, but there has been a change in this respect during the course of the month of April. The pottery workers of Kirkcaldy, after demand upon the masters for higher rates, refusal of the same, and notice of stoppage in consequence of refusal, struck work as from April 5. It has not, however, proved to be a very disastrous matter, whether for the masters or the strikers, for, after a fortnight of cessation, compromise effected a solution and work was resumed, the workers on better terms, though not getting all they demanded. There are a number of different pottery firms in Kirkcaldy and environs, and the whole of these were implicated in the brief stoppage and subsequent rearrangement. More recently there has broken out another occurrence of the same kind, namely, at Bo'ness, Linlithgowshire, but as yet affecting only one of the pottery works of that quarter, the Bridgeness Pottery. The other works, the West Lothian Pottery, are not affected, at least not yet. At the date of writing the Bo'ness dispute is still unsettled, and part of the workers are idling, but there is an early prospect of a further conference between the managers and the employees, and the expectation is that, when that takes place, settlement will be arrived at. In the pottery and glass works of Scotland generally there are, happily, no other ruptures of the kind made manifest up to the time of writing.

Strikes other than those connected with our own industries, as just cited, are rather more in evidence than was the case during March, but as yet there is nothing important or widespread. In the shipbuilding industry new wages claims are now being advanced, but it is to be hoped there will be no stoppage of work, if only in the interests of the pottery and glass trade, which is always the first and longest to suffer in the case of big and prolonged strikes.

Protectionists continue to complain bitterly regarding what they term "the flood of imports." Taking the past three years comparative figures are being quoted, which include the following items imported into the whole of Australia:—Earthenware and china, 1910, £348,879; 1911, £444,765; 1912, £436,239. Glass and glassware, 1910, £416,752; 1911, £473,455; 1912, £596,731. Comparisons are also made in rates of wages paid to workers in different trades in Great Britain and Australia, the following being included:—Plate glass workers, Australia, 1908, 50s. 1d. per week; 1912, 54s. 3d. Great Britain, 27s.—percentage difference, 100. Pottery workers, Australia, 1908, 45s. 6d.; 1912, 48s. 2d. Great Britain, 24s.—percentage difference, 100. The British rates are compiled from the publications of the Board of Trade. The champions of protection urge that these figures show how trifling is the influence of, say, a 30 per cent. duty as against a wages roll of from 50 to 100 per cent. They also point out the difference between a rise in wages in Australia, where such means an advance of 1s. per day, and the same in Great Britain, where—to quote their illustration—the workers in the underground railway service were recently given an advance from 4s. 2d. to 4s. 4d. per day. A letter has been received by the Federal Minister for External Affairs from a well-known Sydney merchant who recently returned from a five months' business trip to the West Coast of India, stating that a large and growing trade in roofing tiles and other ceramic products is now being developed between India and Australia, and giving a glowing account of the immense possibilities for expansion. Imports into the whole of Australia for the month of January of this year, compared with those of the corresponding period of last year, include values of the following items:—Glass and glassware, 1912 (January), £54,291; 1913, £46,357—decrease, £7,934. Earthenware and china, 1912, £43,804; 1913, £38,604—decrease, £5,200.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, March 20.

A GOOD deal of complaint is rife regarding the tension of the money market, and most trades—including the building trade—are suffering from the effects of a decided slump. The pottery and glassware trades appear to be well holding their own, and merchants are of the opinion that the tightness is only temporary, and a natural reaction after our remarkable run of prosperity.

The Federal Minister for Home Affairs has approved of the purchase from a Sydney firm of an Australian-made brick-making machine, and it is to be delivered on the site of the Government brickworks at the new Federal capital within three weeks from ordering. There will then be no delay in the manufacture of the first bricks, and it is anticipated that sufficient bricks for the making of the necessary open kilns will be turned out within a month. These kilns in turn will be used for the making of the immense quantities of bricks which shall be utilised in the erecting of Australia's new capital.

The slaters and tilers have been out on strike in Melbourne for some time, which has had a bad effect on the building trade and on the potteries. However, as the result of a conference just held with the master builders and contractors, the men have decided to resume work at 12s. per day on the employers' promise that they will assist in having the wages board called together at once, when the men's demand for 14s. per day would be considered, and that any rate fixed would be retrospective.

The Gazette.

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

POTTERS' COLOR MANUFACTURING CO., LTD., Bristol.—F. C. Tricks ceased to act as receiver, March 15.

Order made on Application for Discharge.

WELLS REGINALD F., 11, Sloane-st., and workshop at 10A, College-st., Chelsea, sculptor, potter, &c. March 11. Bankrupt discharged subject to his consenting to judgment for £100, being part of balance of debts not satisfied at date of this order.

Notice.

SHEPHERD JAS. & SON, 28, Harriet-st., Aberdeen, glass and china merchants. The business carried on by the late Jas. Millar Shepherd, and for a short period after his death by his testamentary trustees, has been transferred by said trustees to Mrs. Annie Duncan Davidson or Shepherd, as at March 20. The said trustees will collect all debts and pay all accounts in connection with the business up to and including March 19. The said Mrs. A. D. Davidson or Shepherd will continue to carry on said business at above address for her own behoof under the said firm name of Jas. Shepherd & Son, and will discharge all debts and obligations of the firm, as sole partner thereof, after said March 19. (March 25.)

Circular.

BAXTER GEORGE & SON, 82, High-st., Edinburgh, china merchants. The following circular has been issued:—8, North St. David-st., Edinburgh, March 31, 1913. Dear Sirs,—We regret to inform you that Mr. J. D. Baxter cannot carry out the proposed composition arrangement. He has been unable to meet the claims for rates, taxes, and the balance of rent due last November. He has consequently granted a trust deed in favour of our Mr. Morton. Consequent on the winding-up there is a contingent claim for two

years' rent from Whitsunday next, and to make this claim as small as possible we have asked the landlord's solicitor to have steps taken at once to endeavour to find a tenant for the remainder of the lease. We hope to get the stock disposed of without delay, and so that we may proceed at once with the winding up, we shall be obliged if you will sign and return the enclosed form of accession to the trust deed in course of post.—Yours faithfully, (signed) Hodge & Smith, C.A. For statement, list, &c., see April issue of THE POTTERY GAZETTE.

Private Meetings.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

HENDERSON S. E., 6, Camberwell Station-rd., Camberwell, S.E., wholesale china and glass merchant.—(Special Report.)—The creditors herein were called together recently, when a statement was presented showing liabilities of £1,287 18s. 5d. The indebtedness to the trade was £663 18s. 5d., and the balance of £624 was owing in respect of cash claims. The assets consisted of stock-in-trade estimated to produce £202 2s. 5d., and book debts expected to realise £103 16s. The assets therefore totalled £305 18s. 5d., or a deficiency of £902. It was reported that the debtor started trading for himself about six years ago with a capital of £200 which he borrowed. That amount he repaid, but he had since borrowed further amounts. He also placed in the business a sum of £275 of his own money. The debtor was of the opinion that his present position was due to losses in trading. His trade was largely with licensed victuallers, and that business had considerably altered in recent years. In answer to questions the debtor stated that his turnover had averaged about £3,500 per annum, but during the last eight or nine months he had lost about £10 a week. Questioned as to his drawings, the debtor stated that they were £3 per week, but he had also drawn £1 a day for travelling expenses when he was on the road. With regard to the cash claims it was stated that the London, City & Midland Bank were interested for £20, and a Mr. Hartnell for £200, the balance of £404 being due to the debtor's wife. The debtor's solicitor stated that a friend would very likely come forward and assist him, and he was authorised to make an offer of 3s. in the £. If that offer was accepted the wife would withdraw her claim. After some discussion it was decided that a deed of assignment should be executed, and that the matter should be further investigated, and that if the principal creditors thought that the offer was a good one that it should be accepted.

PITT Miss E., Shirley-st., Hove, china dealer and draper. At a meeting of the creditors held on April 16 it was decided that an assignment should be executed. The following are creditors :—Faudels, Ltd., London, £19 ; Ludbrook & Co., London, £10 ; Birn Bros., London, £5 ; Wisbey & Co., London, £19 ; A. Groizard, Brighton, £6 ; Brighton Bros., Hove, £37 ; C. F. Pitt, Manchester, £27 ; preferential creditors, £6 ; liabilities, £150 ; assets, £92.

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

* *These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—EDS. P.G.)

CHALKER LEWIS HY., 187, Middlewood-rd., Sheffield, general dealer. Dated March 25. Filed March 31. Liabilities unsecured, £1,407. Property, after deducting secured claims, £505. Tr., J. Henderson, 6, East-parade, Sheffield. The following are creditors :—J. King, London, £30 ; —. Enderlin, London, £11 ; Baldwins, Ltd., Birmingham, £30 ; Fletcher Hardware Co., Birmingham, £14 ; Wells Bros., Birmingham, £12 ; Bourne & Leigh, Burslem, £12 ; Emery Bros., Fenton, £12 ; W. Smithson, Hemsworth, £250 ; Mrs. J. Chalker, Hemsworth, £30 ; J. Poole, Longton, £16 ; T. Hulse, Longton, £10 ; H. & G. O. Lewtas, Manchester, £18 ; Mrs. G. G. Chalker, Sheffield, £500 ; H. Blumberg, Sheffield, £16 ; F. J. Bramwell, Sheffield, £11 ; R. B. Hickson, Southport, £30 ; banker's claim, £250.

COLLEY ARTHUR HY., 36, Parliament-st., York, dealer in china, glass, and earthenware. Dated March 14. Filed March 26. Liabilities unsecured, £247. Property, after deducting secured claims, £179. Tr., C. Turner, 155, Norfolk-st., Sheffield. Secured creditors, £28. The following are creditors :—W. Wood & Sons, London, £11 ; Anglo-Belge Glass Association, Ltd., London, £4 ; A. Abraham & Sons, London, £4 ; Faudels, Ltd., London, £8 ; W. Middleton, Aberdeen, £5 ; T. Till & Sons, Burslem, £8 ; King & Barratt, Burslem, £5 ; Harling & Son, Castleford, £7 ; Watson Pottery Co., near Chesterfield, £5 ; Soho Pottery Co., Ltd., Cobridge, £3 ; H. Ritchie & Sons, Edinburgh, £7 ; Horn Bros., Ferrybridge, £7 ; Dr. S. H. Smith, Fulford, £3 ; Weatherby & Sons, Hanley, £9 ; New Hall Pottery Co., Ltd., Hanley, £6 ; J. Riley & Co., Liverpool, £7 ; T. Hulse, Longton, £21 ; T. Forester & Sons, Ltd., Longton, £5 ; Clough & Lester, Longton, £4 ; British Anchor Pottery Co., Longton, £9 ; Haigh & Sons, Ltd., Southall, £3 ; Johnson Bros., Stoke-on-Trent, £8 ; Yorkshire Discount Co., York, £15 ; York Corporation, York, £4 ; Overseer of Poor (rates), £7 ; banker's claim, £60.

HENDERSON SYDNEY, 6, Station-rd., Camberwell, and 45, Calverley-rd., Bromley-rd., Catford, glass merchant. Dated March 26. Filed April 1. Liabilities unsecured, £1,337. Property, after deducting secured claims, £305. Tr., H. B. Hartnell, 12, Daysbrook-rd., Streatham. The following are creditors :—Caterer Publishing Co., Ltd., London, £13 ; T. King, London, £8 ; W. Edwards, London, £13 ; M. & J. Guggenheim, London, £24 ; Flageollet & Co., Ltd., London, £87 ; Lang Jonas & Co., London, £215 ; H. Hurter & Son, London, £10 ; J. Deakin & Son, London, £154 ; R. Dickeson & Co., Ltd., London, £9 ; S. Roberts, London, £5 ; H. B. Hartnell, London, £200 ; Mrs. E. J. Henderson, London, £404 ; J. Watt, London, £11 ; London, Chatham & Dover Railway, London, £19 ; —. Audy, London, £12 ; Rundael, Ltd., London, £5 ; E. A. & W. Greenslade, Bristol, £3 ; Worswicks, Croydon, £25 ; F. Wilkes, Dudley, £16 ; Sampson Bridgwood & Son, Longton, £12 ; Richardson & Co., Ltd., Newcastle-on-Tyne, £5 ; F. Mills & Co., Ltd., Sheffield, £39 ; Webb & Corbett, Ltd., Stourbridge, £10 ; rates and taxes, £6 ; gas, £7 ; telephone, £3.

ROBINSON GEO., Narrowgate-st., Alnwick, and Bondgate Without, Alnwick, china merchant. Dated April 15. Filed April 19. Liabilities unsecured, £392. Property, after deducting secured claims, £197. Tr., H. Bailey, Stott-st., Alnwick. Secured creditors, £1,750. The following are creditors :—E. Carr (rates), Alnwick, £13 ; E. Turner, Alnwick, £15 ; A. Robertson & Sons, Alnwick, £10 ; Mrs. Shiel, Gateshead, £12 ; T. Walters, Longton, £26 ; J. H. Cope & Son, Ltd., Longton, £23 ; Collingwood Bros., Longton, £10 ; T. C. Maling & Sons, Newcastle-on-Tyne, £10 ; Pottery & Glass Supply Co., Newcastle-on-Tyne, £67 ; E. J. Macdonald, South Shields, £38 ; Clay Bros., Stourbridge, £19.

SHUFFLEBOTTOM WM., The Royal Crown Pottery, Cannon-st., Hanley, and 87, Lichfield-st., Hanley, earthenware manufacturer. Dated April 14. Filed April 21. Liabilities unsecured, £338. Property, after deducting secured claims, £225. Tr., C. E. Bullock, Albion-st., Hanley. The following are creditors :—Furnivals, Ltd., Cobridge, £44 ; Anderton Co., Etruria, £11 ; Cannon-st. Brickworks, Hanley, £13 ; Shelton Iron, Steel & Coal Co., Ltd., Hanley, £133 ; Central Potters Mills, Hanley, £11 ; Varcoe & Sons, Stoke-on-Trent, £25 ; Pike Bros., Warham, £13.

Bankruptcy Proceedings.

LEEK THOS. FOXTON, the Higher Brick Works, Littlethorpe, Ripon, brick and tile manufacturer. R.O. March 20. Adj. March 28.

LONG JNO. WM., 19, Whitby-terrace, off Cemetery-rd., York, glass blower. R.O. April 14. Exam. Courts of Justice, York, May 2 at 11. Adj. April 14.

POLACK E. J., Goldhurst-terrace, Hampstead, porcelain manufacturer.— (Special Report.)— At Bankruptcy-buildings, Carey-st., London, W.C., on April 16, the statutory first meeting of creditors was held under the failure of Edwin Julius Polack, manufacturer of porcelain and semi-porcelain wares, described in the receiving order as of Goldhurst-terrace, Hampstead. The debtor formerly carried on business as a shipper under the style of E. Polack & Co. at Brown's-buildings, Loveday-st., Johannesburg. Mr. Egerton S. Grey, official receiver, presided. The Chairman reported that the debtor had stated that before 1893 he was in employment. In that year he went to South Africa and until 1900 traded as above, returning to this country in January, 1900, with a capital of £20,000. Between 1900 and 1909 his principal occupation was that of experimenting in processes for toughening porcelain wares. In March, 1909, he entered into a contract to purchase the Swan factory in Binn's-rd., Liverpool, from the receiver for the debenture holders, and the purchase was completed by March, 1910, at the price of £3,500 or thereabouts. For some months he was engaged in making improvements and putting the place in order, and in or about the summer of 1910 he began to trade under the style of the Polack Manufacturing Co., porcelain manufacturers. At that time the property was charged to the United Counties Bank. In October, 1910, the debtor formed a company, which was a private concern, and called the Polack Manufacturing Co., Ltd., and during the negotiations he was promised capital up to £50,000 ; but when the company was formed the money was not forthcoming ; and inasmuch as he required a minimum capital of £40,000, the company passed a resolution making it a public concern, and increased its capital from £25,000 to £75,000 by the issue of 50,000 preference shares. These shares were allotted to him in trust to convert into bearer warrants and deliver to a certain bank against payments under an underwriting contract approved by the company. The debtor alleged that the bank, through its managing director, perpetrated a fraud, and used the sum of £1,400 which had been deposited with it for his own purposes. The company had appointed the debtor trustee to prosecute an action against the bank

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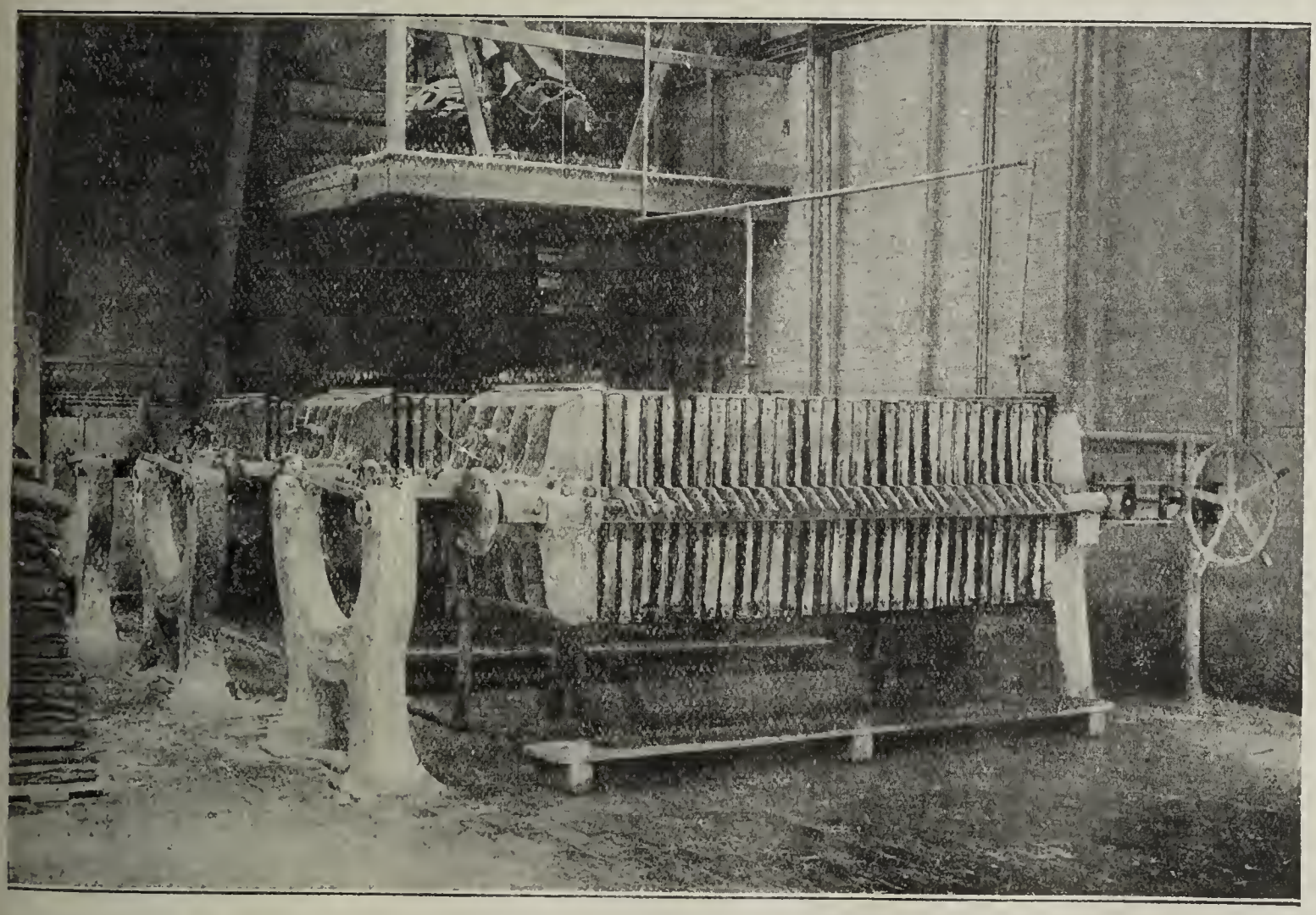
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for return of the money and for damages, and this action had been referred to the official referee. The debtor had further stated that the contract for sale to the Polack Manufacturing Co., Ltd., was executed but had never been carried out, and no portion of the purchase money had been paid. The consideration was £11,500 in cash and £24,999 by the allotment of shares ; also, the stock was to be taken at a valuation, and the company was to discharge his debts and liabilities in relation to the business. On Dec. 20 last he gave notice through his solicitor to the company to complete the purchase within thirty days or to cancel the contract ; but nothing had been done, and the present position was that the works were locked up. The freehold was mortgaged to the United Counties Bank for £15,000, and an action for possession was pending. The debtor attributed his failure to the alleged fraud perpetrated by the before-mentioned bank official and to the alleged pressure by the United Counties Bank. On behalf of the debtor a statement of his affairs was handed in, in which it was said that the liabilities amounted to £11,081, but that figure was based on the assumption that the United Counties Bank were fully secured creditors, whereas they appeared to claim to be unsecured to the extent of £7,000, in which event the liabilities must be increased to £18,000. The assets were valued at some £1,400 to £1,500, and so the position as far as that statement of affairs was concerned was not very bright for the unsecured creditors. In the circumstances an adjournment of the meeting was applied for in order that the debtor might have an opportunity of submitting a scheme for the benefit of his creditors. For some time past the debtor had been trying to persuade some friends to put money into this business in which he himself thoroughly believed, and there was actually a gentleman in France who was going to put up £30,000, but unfortunately the receiving order was made against the debtor's estate and he did not feel justified in advancing the money. But the debtor intended to see this gentleman in order to ascertain whether the money could still be procured ; if it were forthcoming, he thought that he would be in a position to submit to his creditors a substantial composition. Looking at the figures disclosed in his statement it did not, to the speaker, seem that a dividend of more than 1s. in the £ was likely to be paid to unsecured creditors. Yet there was no doubt that if money could be obtained for the works there was a valuable property, and in all these circumstances it was suggested that there should be an adjournment of the meeting. The Chairman said that in his opinion the case was eminently one in which a trustee should immediately be appointed. The debtor had already had three and a half months to look round since the petition in bankruptcy was presented against him, and the result was what they saw that day. What hope was there that if the meeting were adjourned he would obtain the large sum of money to which allusion had been made ? He (the Chairman) very much doubted whether a man would find this sum. What he advised the meeting to do was to pass a resolution for bankruptcy and to appoint a trustee ; this would be no bar to the debtor's bringing in a proposal at any time. The debtor remarked that in the event of bankruptcy the money would certainly not be forthcoming. The Chairman said that in any event he intended to use his proxies in favour of adjudication. Although a resolution to this effect might be passed, the debtor could still urge his case before the Court when application to adjudicate was made, and the Court would, if it thought proper, give him further time to make any arrangements. Some discussion ensued, and a resolution for bankruptcy was then passed. Mr. Frank William Gapp, auctioneer, 5, Sloane-st., S.W., was appointed the trustee, and the proceedings terminated.

Stewart Ernest William and Mark Thomas Stewart (trading in co-partnership as E. W. and M. T. Stewart), 54 and 56, Surrey-st., Norwich, china, glass, and earthenware warehousemen. (Special Report.) Mr. Registrar Cooke held a sitting at Norwich, on April 23, for the public examination of the above-named debtors, whose deficiency totalled £698. It transpired that the debtors started trading on their own account in 1883, when the debtor, Ernest William Stewart, had a capital of £50, but the brother did not introduce any capital into the business. It was arranged that they should each draw about £1 a week from the concern, and this was at first done. They subsequently drew £2 a week, but when the cash was tight they did not draw so much. It was chiefly a wholesale trade, and the books kept by the debtors showed a record of all their transactions. Stock was taken every March, and a rough balance-sheet prepared. They last took stock in March, 1909, and it was then shown that they had liabilities of £1,010 and assets amounting to a little over £1,000. From that time the business had fallen off, and the whole of the present deficiency had been incurred during the last four years. The debtor, Mark Thomas Stewart, was questioned by the Official Receiver, and eventually the case was declared closed.

Tansley Vivian, trading as Vivian Tansley & Co., 4, Vernon-rd., Leeds, and as the North-Eastern Bottle Co., 64, North-st., Hull, and 4, Vernon-rd., Leeds, importer and merchant. R.O. April 8. Exam., C.C. Leeds, May 20 at 11. Adj. April 8. The following are creditors :—Binnie & Co., Liverpool, £38 ; P. MacLachlan, Glasgow, £31 ; W. G. Sellers, Hull, £17 ; Vogelpoel & Norwigian, Rotterdam, £260 ; Bankers, Leeds, £435.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

Articles Made of Clay, No. 7,020.—F. Eardley & J. Gimson & Co., Ltd. Objects or articles made of clay or clayey mixtures such as can be baked or fired. March 22, 1913.

Automatic Glass Moulding and Blowing Machines, No. 7,891. H. Severin. Automatic glass moulding and blowing machines. April 3, 1913.

Bottles, Jars, &c., No. 7,082.—J. C. Kenwood. Bottles, jars, and the like vessels for milk and other fluids. March 25, 1913.

Bowl, No. 7,114.—W. D. Hensell. Bowl. March 25, 1913.

Clay Extrusion Machines, No. 8,083.—P. H. Mellor and I. H. Wilkinson. Clay extrusion machines. April 7, 1913.

Glass Grinding Machines, No. 6,862.—W. L. Kann. Glass grinding or polishing machines. March 20, 1913.

Drying Plastic Materials, No. 8,068.—O. Eberhard. Method of drying plastic materials and apparatus therefor. April 5, 1913.

Moulds for Manufacture of Glassware, No. 6,118.—R. H. W. Boulton. Moulds for use in the manufacture of wide mouthed glassware articles, such as tumblers, finger bowls and the like. March 12, 1913.

Specifications Published.

1911.

25,980.—Lee. Metallising ceramic and other surfaces.

1912.

6,853.—Clarke. Valves for slip and the like pumps.

15,258.—Taschl. Method of and apparatus for cleaning and conveying stiff masses such as starch, clay, or the like from channels, troughs, basins and the like.

5,548.—Smith. Flower pots or the like.

8,674.—Parks. Roofing tiles.

27,527.—Davis & Wells. Facing tiles.

6,913.—Riedemann. Automatic cutting or sovering device for clay presses.

1913.

2,176.—Wolf-Burckhardt & Borchers. Quartz glass.

2,150.—Wolf Burckhardt. Method of manufacturing transparent quartz glass articles.

3,113.—Marks (Badische Maschinenfabrik & Eisengiesserei vorm G. Sebold und Sebold & Neff). Sand blast apparatus with revolving drums and means for driving the same.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

612,992.—O. Kamphovener, 3, Falcon-avenue, Aldersgate-st., E.C.
613,731.—Adderleys, Ltd., Longton.
613,896-7.—Weiss & Biheller, 68-70, Chiswell-st., E.C.
613,898.—R. E. Eve, 6, Bird-st., Oxford-st., W.
613,961.—Bourne & Leigh, Albion Pottery, Burslem.
613,962.—Falcon Pottery, Stoke-on-Trent.
614,017.—Pountney & Co., Ltd., Causeway, Fishponds, Bristol.
613,850.—G. Ford & Co., 79, Rockingham-lane, Sheffield.
613,948.—T. H. Hazelwood, 78-9, Unett-st., Birmingham.
614,172.—R. H. & S. L. Plant, Tuscan Works, Longton.
614,294.—J. Lang & Son, Charlton-place, Islington, N.
614,327-9.—H. H. Walford, 121, Rotten Park-rd., Birmingham.
614,424.—Star China Co., Atlas Works, Longton.
614,425-6.—Burgess & Leigh, Middleport Pottery, Burslem.
614,434.—Lyall Willis & Co., Billiter House, Billiter-st., E.C.
614,594.—Grimwades, Ltd., Stoke-on-Trent.
612,328.—A. A. Whitaker, 444, Lytham-rd., Blackpool.
615,463-4 and 613,899.—Peters & Doring, Spaldingstrasso 210-212, "Hammaburg" Hamburg 15, and Corporation Chambers, 54, Lower Thames-st., E.C.
614,646.—H. H. Walford, 121, Rotten Park-rd., Edgbaston, Birmingham.
614,676.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.
614,691.—O. A. Pfeifer, 6, Dyer's-buildings, E.C.
615,214.—Gerrit van der Hoek, 69, Farringdon-rd., E.C.
611,856.—Heath & Co., Ltd., Crayford, Kent.
614,330.—E. Tilston, 12, Sicilian-avenue, W.C.
614,539.—H. W. Ellis, 267, Coventry-rd., Ilford.
614,900.—Soc. Anon. des Manufactures des Glaces et Produits Chimiques de Saint-Gobain Chauny et Cirey Ibis, Place des Saussaies, Paris, Franco. Address for service c/o G. Shaw & Co., 35, Temple-row, Birmingham.

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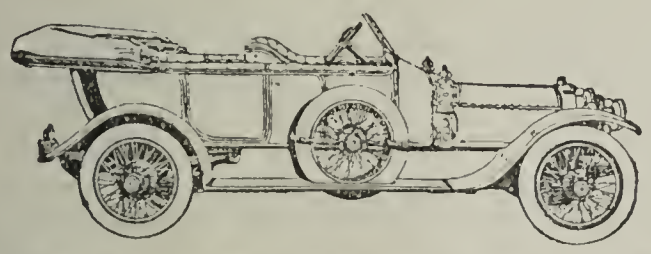
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LAMBETH, LONDON, S.E.

615,061.—Alexander & Macdonald, 15, Quality-st., Leith.
615,204-6.—D. M. W. S., Ltd., Enfield-rd., Acton, W.
615,312.—The International Bottle Co., 108, Fenchurch-st., E.C.
615,378.—Pilkington's Tile and Pottery Co., Ltd., Clifton, near Manchester.
615,379.—W. A. Bailey, 148, Audrey House, Ely-place, E.C.
614,435.—M. Fisher, Hambro Hill, Rayleigh, Essex.
614,794.—Soho Pottery, Ltd., Waterloo-rd, Cobridge.
615,194.—A. G. H. Jones, Duke-st., Fenton.
615,213.—J. H. Tucker, King's-rd., Hay Mills, Birmingham.
615,215.—J. Wedgwood & Sons, Ltd., Etruria, Stoke-on-Trent.
615,373-77.—F. L. Keppler, 204, Friedrichstrasse, Berlin, Germany. Address for service c/o J. Wetter, 37 and 39, Essex-st., Strand, W.C.
615,581.—A. R. Muller, 56, Shernhall-st., Walthamstow, E.
615,685.—W. J. Beville, 1, Stock Orchard-crescent, Holloway, N.
615,774.—Pilkington's Tile and Pottery Co., Ltd., Clifton, near Manchester.

Reviews.

The Book of Old China. By Mrs. Willoughby Hodgson. Price 3s. 6d. net. London: G. Bell & Sons, Ltd.

How widespread is the cult of collecting old china is evidenced by the fact that the author of "How to Identify Old China" has seen fit to publish a book which is to be merely a register of one's ceramic possessions. It provides a certain number of pages for each type of porcelain, beginning with the Bow Pottery and ending with Chinese. Provision is made under each head for the tabulation of the following particulars regarding each piece:—"Description," "How Acquired," "Date," "Price," and "Remarks." Space does not permit the cataloguing under separate headings of all the smaller English and Continental factories, and for these miscellaneous pages are provided. In addition to the register, there is a glossary of terms and a fairly comprehensive array of marks, but Mrs. Hodgson wisely warns the amateur against depending solely upon the marks he may discover on china he is contemplating purchasing. The glossary of terms is neither very extensive nor technical; it is obviously intended to meet the needs of collectors with very superficial knowledge. For instance, "Pottery and Porcelain" are explained by the remarks: "Pottery or earthenware is opaque, porcelain or china is translucent. . . . No ray of light can pierce pottery. . . ." With this definition, salt-glaze of the very thin type would have to be classed as porcelain, but it is not, though it was intended to rival china.

Transactions of the English Ceramic Society. Vol. XII. Session 1913. Part I. Published by the Society, County Pottery Laboratory, Stoke-on-Trent.

Once again this Society have found it necessary to issue their annual proceedings in two parts, but the half volume just published exceeds in size many of the previous whole volumes, and is certainly the "best yet" of the Society's publications. It contains, as usual, lists of officers and members, and a copy of the rules. The frontispiece is a portrait of the President for the Session, Mr. C. W. Thomas. Several papers with discussions are also printed, the titles and authors being: "The Behaviour of some Glazes in the Glost Oven (1)," J. W. Mellor, D.Sc.; "Surface Combustion," A. J. Campbell; "The Simultaneous Determination of Small Quantities of Titanium and Vanadium Colorimetrically," J. W. Mellor, D.Sc.; "Electrical Process for the Purification of Clays," W. R. Ormandy, D.Sc.; "Contribution towards a Bibliography of the Art of Glass," M. L. Solon. Reports of these have already appeared in The Pottery Gazette. Mr. M. L. Solon's contribution occupies a dozen pages, and must represent the results of long and laborious research. (We regret, by the way, to learn that this gentleman is seriously ill, and we sincerely trust that he will be spared to make other contributions to this work.) The Question Box, a recently instituted feature, comprises discussions on "What is the Fur found on Moulds used for Casting Slip?" "What is the Cause of the Curling of Enamels, particularly Celeste?" "Cause and Prevention of Blebs in Bone China Casting Slip," "What is the Cause of Cracks through Centre of Plates?" "What Method or Methods should you adopt, during Firing, to prevent Spurting out in Wad Rolls and Saggar Bottoms?" Mr. J. A. Audley contributes a short note on Wedgwood Pyrometer Trials. The most notable item in the whole volume is a series of tables to facilitate the calculation of glaze formulæ, and in the reduction of analyses to formulæ. It is, of course, an undoubted waste of time in calculating glaze formulæ and in reducing analyses to formulæ to be compelled to divide numbers time after time by the same factors. The English Ceramic Society has recognised this, and Dr. Mellor has striven in the tables in question to dispense with this unnecessary work and once for all to show the quotients at a glance. These tables cover the conversion of analyses and recipes into glaze formulæ with all the ordinary glaze materials. A "Glaze Triangle" is given at the commencement, and 35 tables are given dealing respectively with "Sodium Carbonate, Crystalline Soda, Washing Soda"; "Potassium Carbonate, Pearlash, Potash"; "Magnesium Carbonate, Magnesite"; "Barium Carbonate, Witherite"; "Sodium Nitrate, Soda Nitre, Chili Saltpetre"; "Potassium Nitrate, Nitre, Saltpetre"; "Calcium Fluoride, Fluorspar"; "Sodium Tetraborate, Anhydrous Borax, Calcined Borax, Borax Glass"; "Boric Acid"; "Borocalcite"; "Basic Lead Carbonate, White Lead"; "Red Lead Minium"; "China Clay"; "Swedish Felspar"; "Dry White and Buff Stone"; "Purple Stone"; "Mixed Stone"; "Aluminium Hydroxide," "Alumina," "Ferric Oxide," "Calcium Carbonate, Whiting"; "Calcium Oxide, Lime"; "Magnesium Oxide, Magnesia"; "Barium Oxide, Baryta"; "Lead Monoxide, Litharge"; "Potash"; "Soda"; "Ferrous Oxide"; "Stannic Oxide, Tin Oxide"; "Zinc Oxide"; "Titanic Oxide"; "Silica, Quartz, Flint"; "Boric Oxide." The volume concludes with the usual short abstracts of articles which have appeared in the world's technical press dealing with pottery and glass. On page 58 we notice a misprint. The last "per cent." should, of course, be deleted. However, on the whole, the work is fairly immune from error, and will constitute another valuable contribution towards the ceramic literature of this country.

Kelly's Directories, Ltd., of 182-3-4, High Holborn, W.C. have just issued a new edition of their "Directory of the Merchants, Manufacturers and Shippers of the World." The book contains over 3,450 closely printed pages (on the majority of which as many as 400 names are to be found). The headings throughout are given in English and French and also in the commercial language of the country to which any particular section refers. The information given relates to little short of 20,000 foreign and colonial cities and towns, and there are nearly 1,250,000 trade classifications given under them. The indices give some 150,000 references. The regulations in force with reference to commercial travellers and their samples are fully set out at the commencement of the work. The 1913 edition of Kelly's "Customs Tariffs of the World" has also been issued. The edition extends to over 1,100 pages in double columns. New tariffs, among others, have been added for Costa Rica, Salvador, Panama, Libya (Tripoli) and Cyrenaica, &c.

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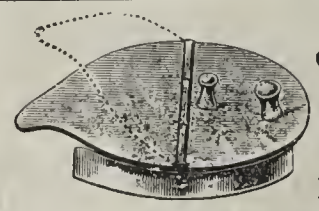
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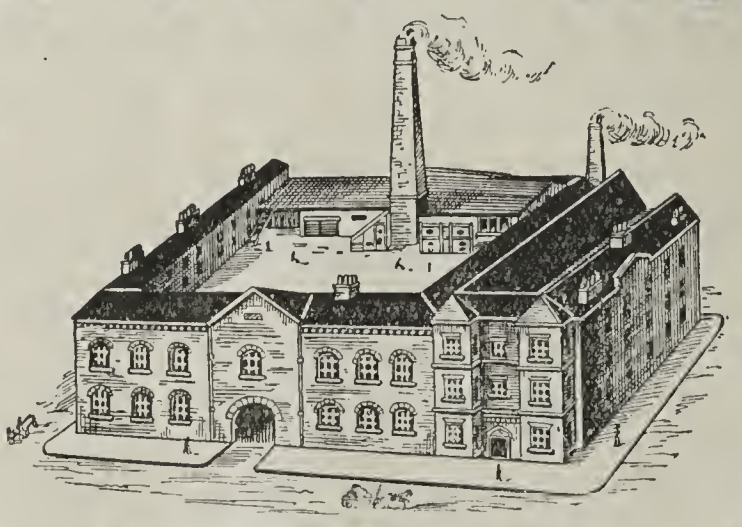
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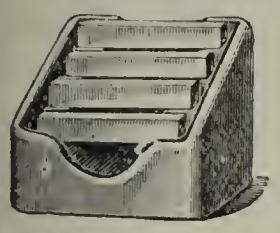
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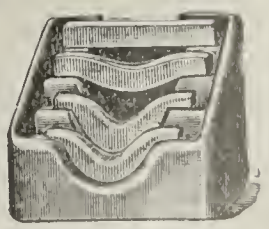
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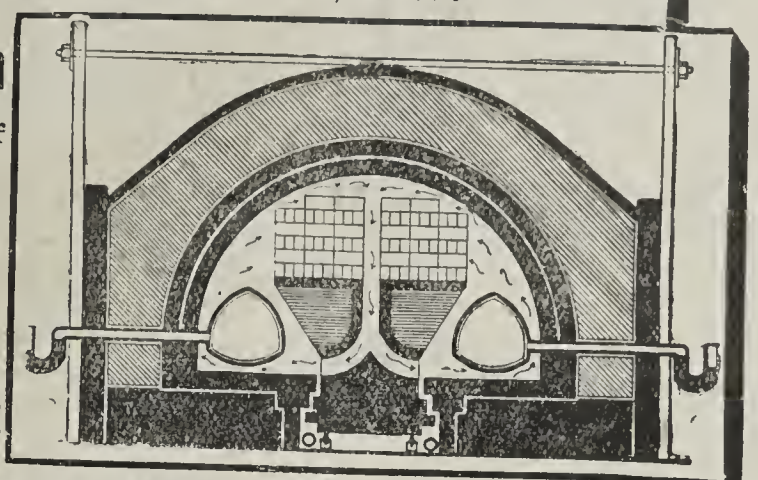
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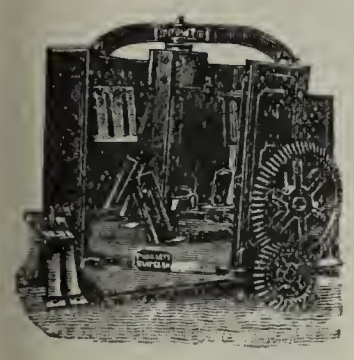
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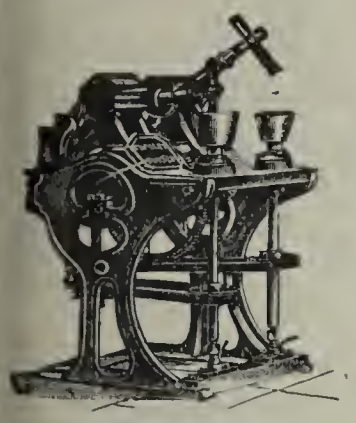
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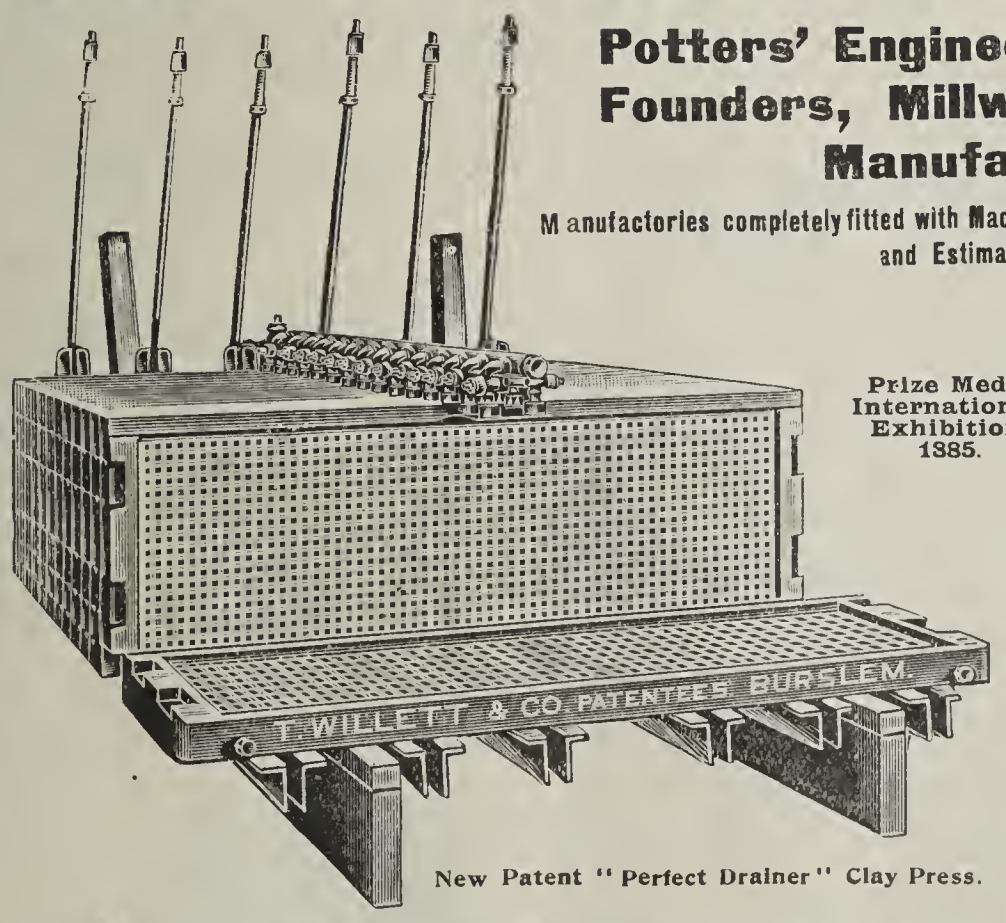
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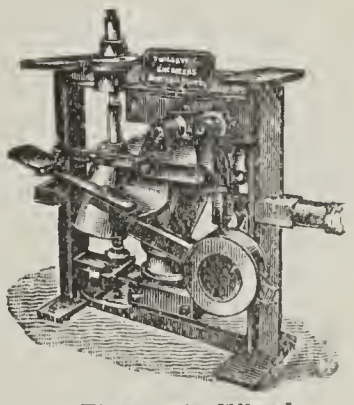


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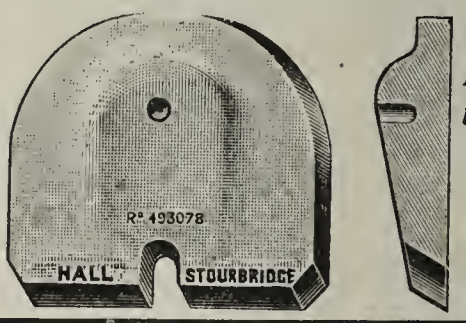
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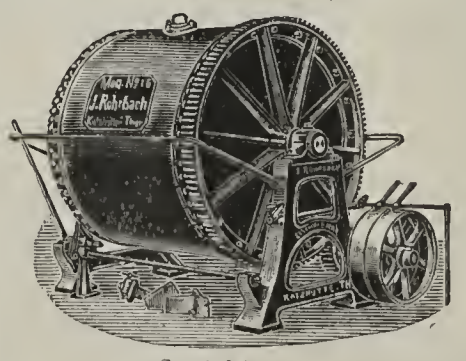


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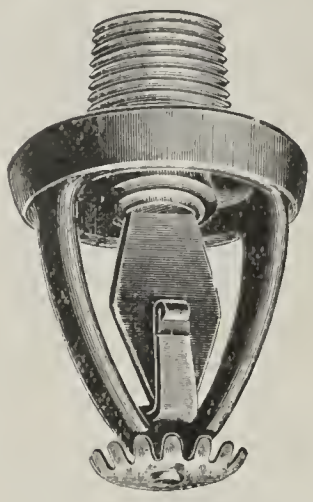
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Fenton, Stoke-on-Trent, June 6th, 1912.

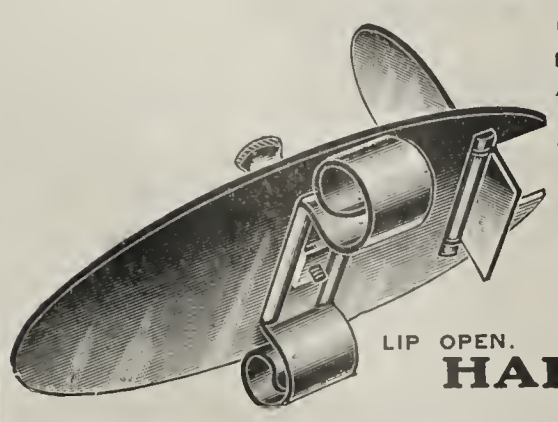
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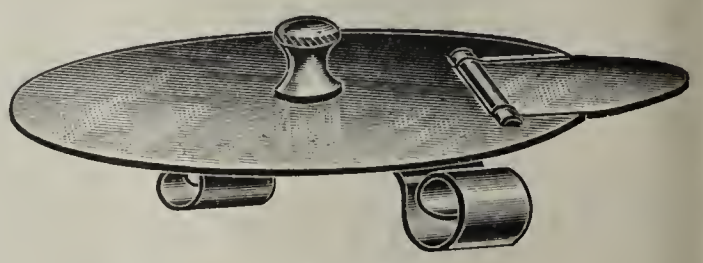
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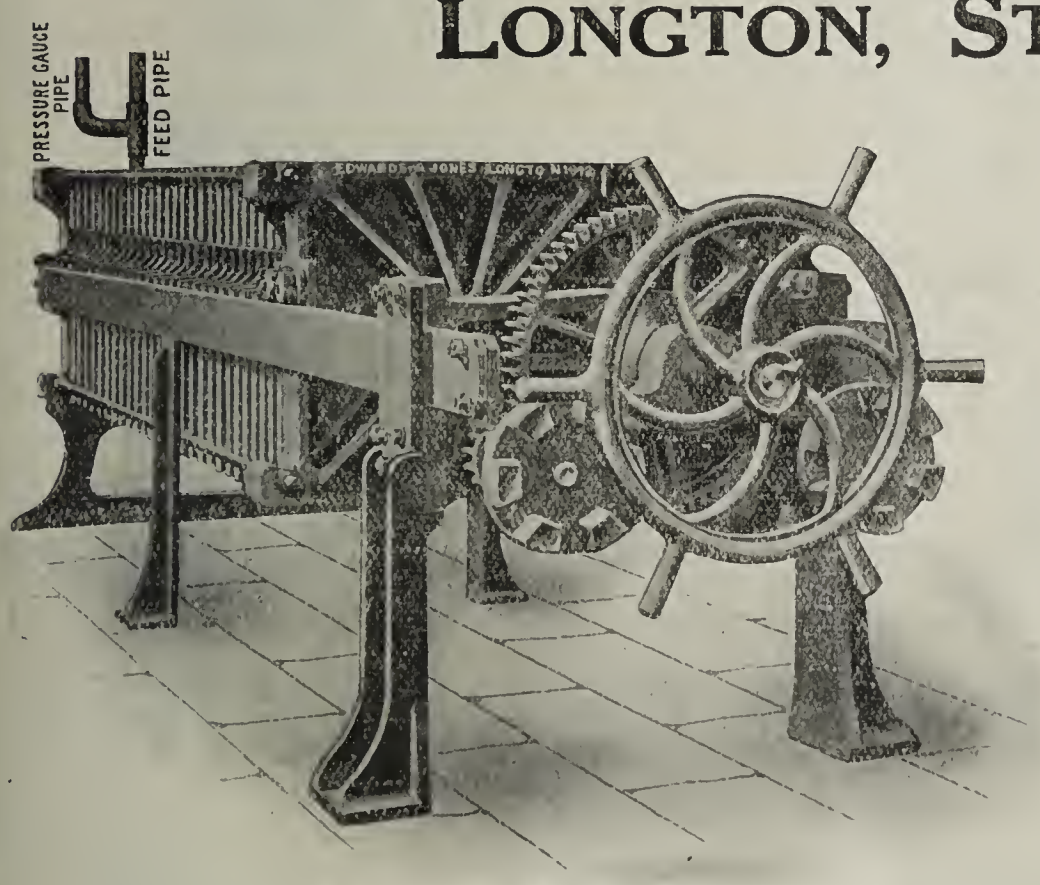
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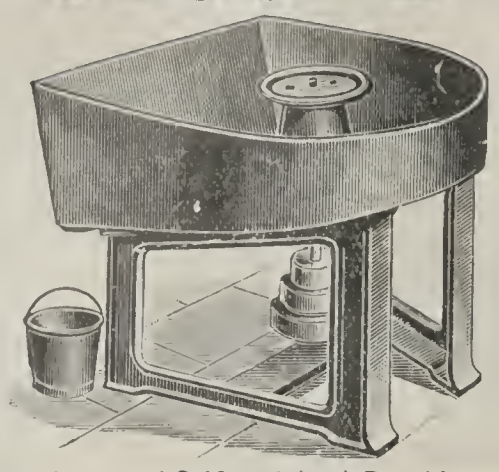
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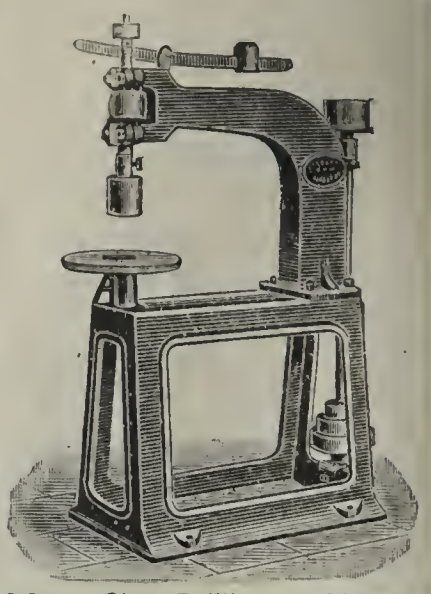
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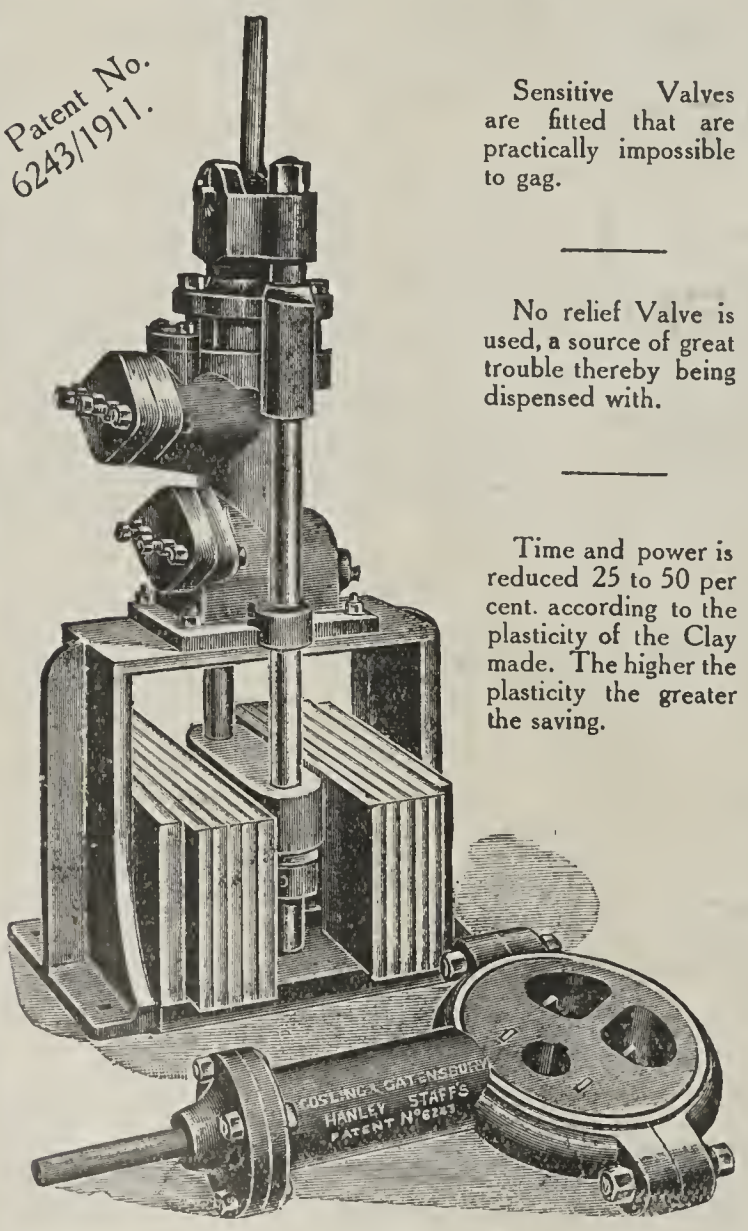
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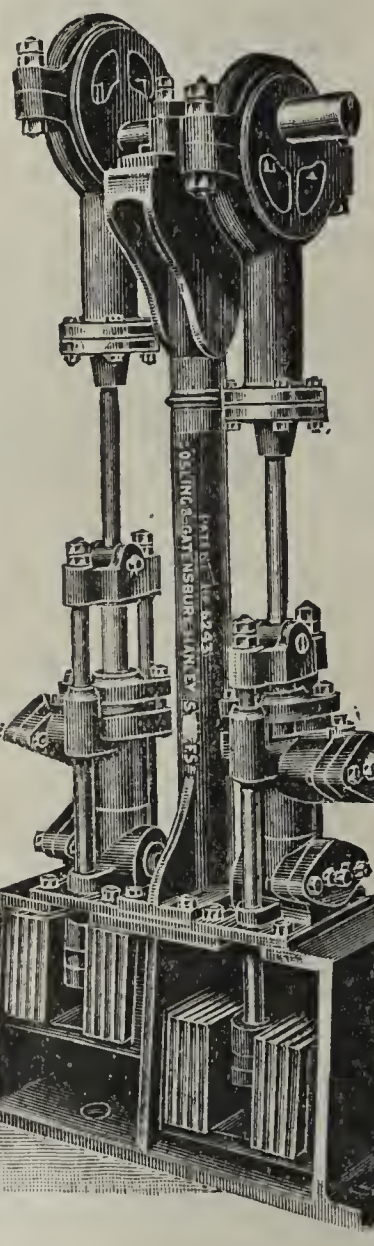
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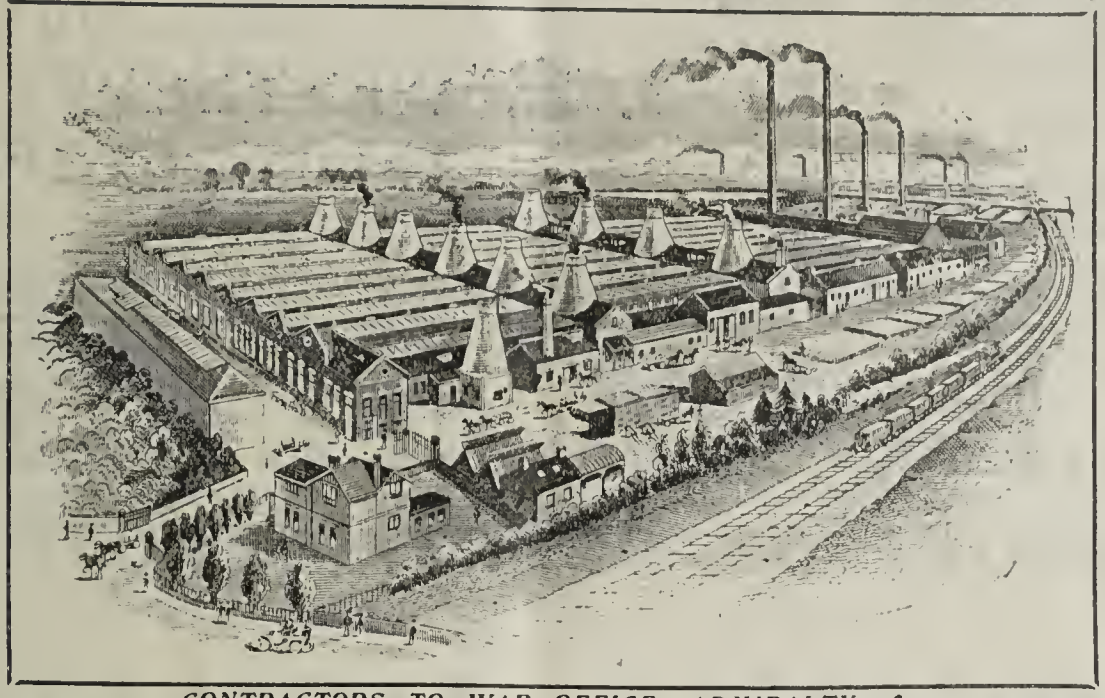
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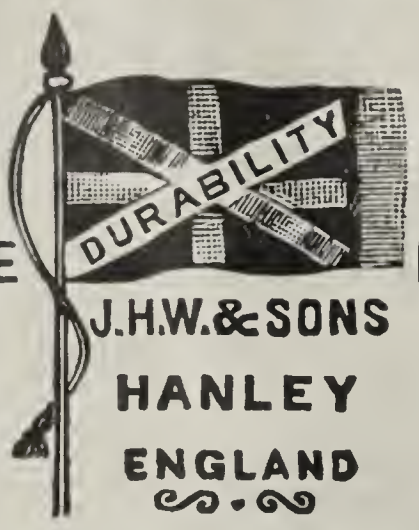
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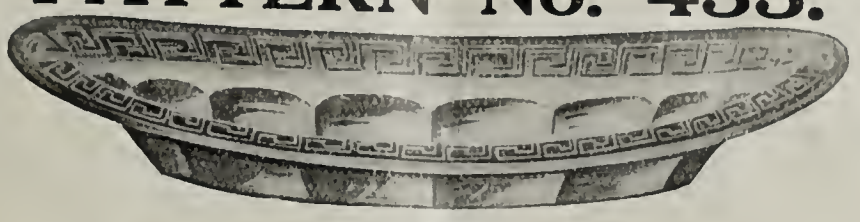
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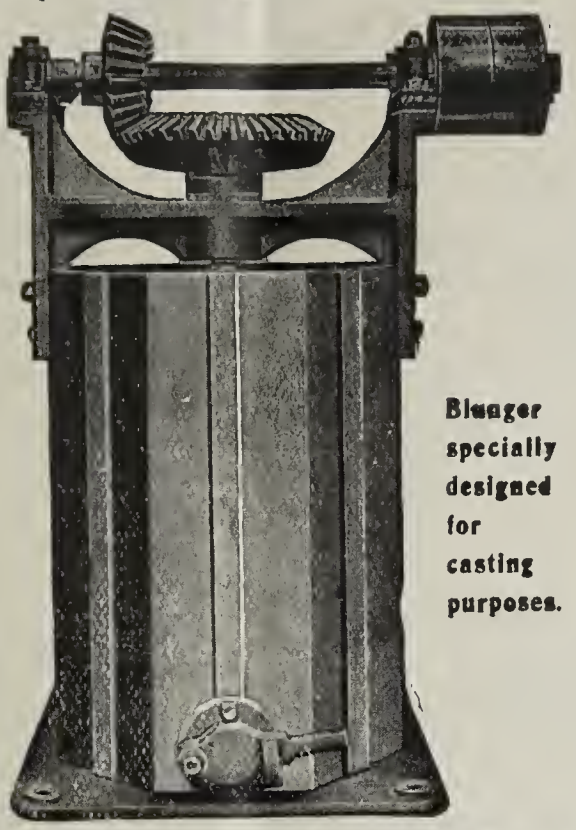
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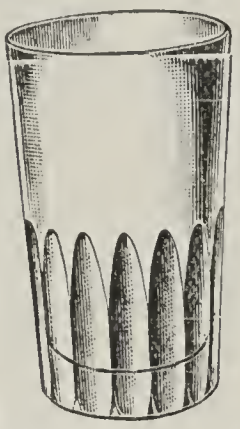


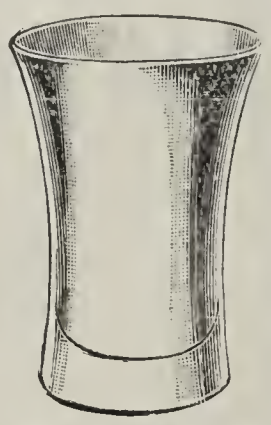
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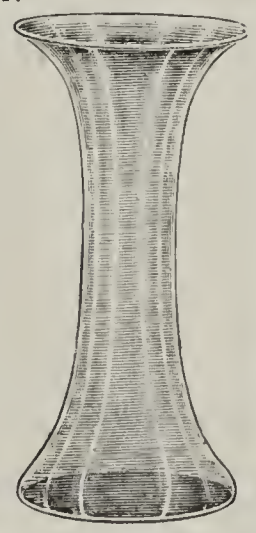
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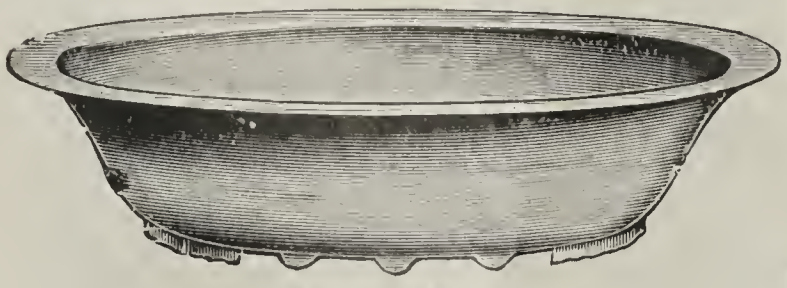
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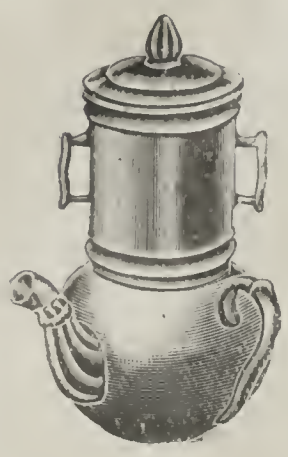
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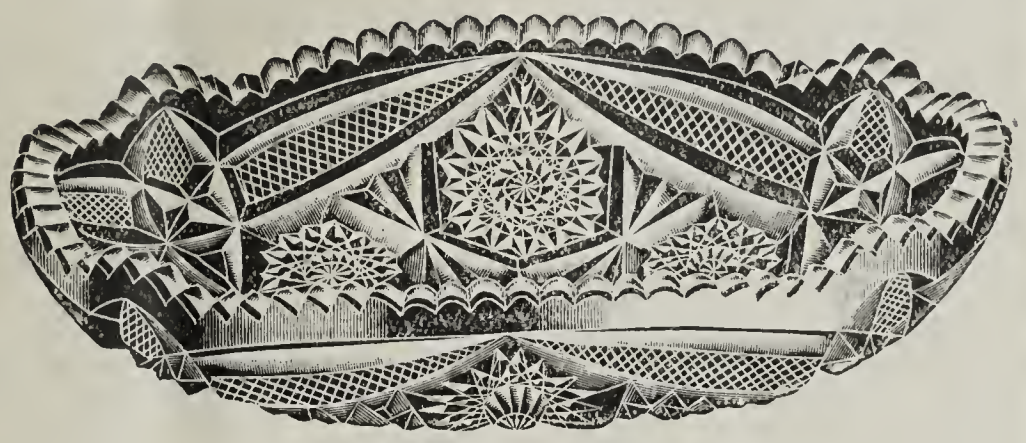
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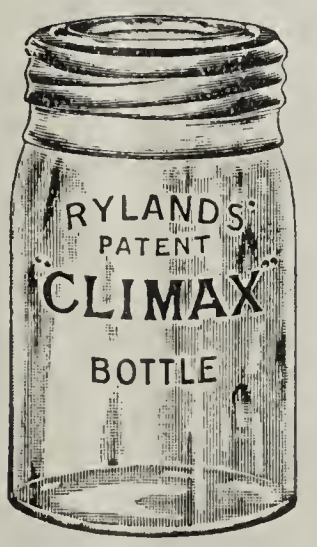
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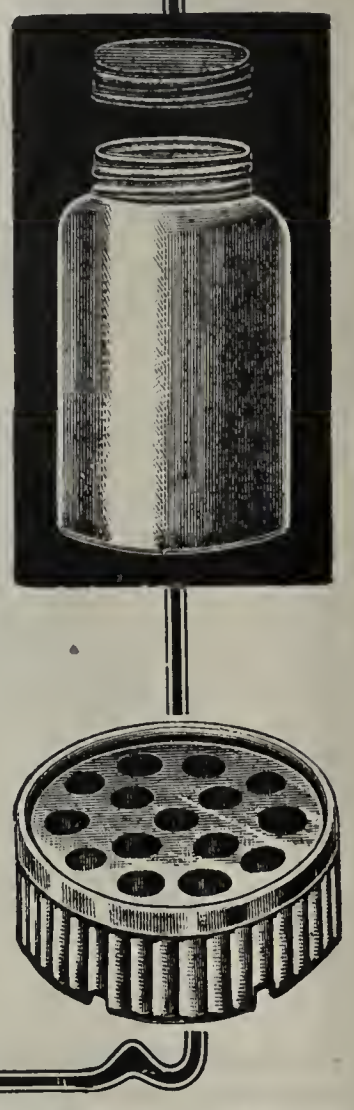
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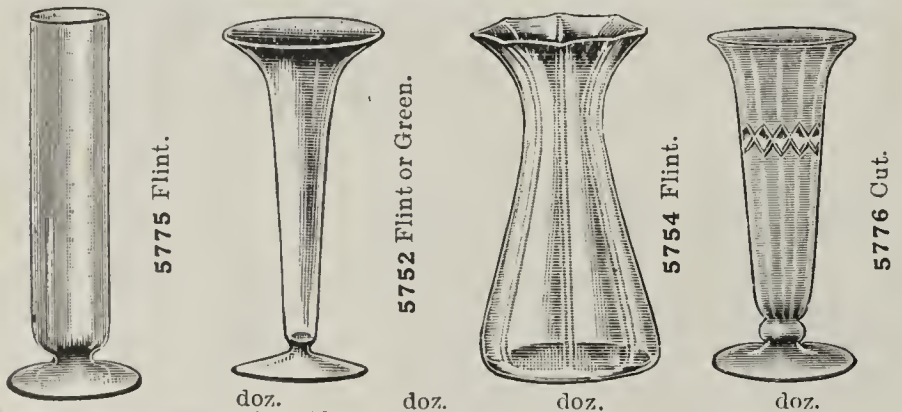
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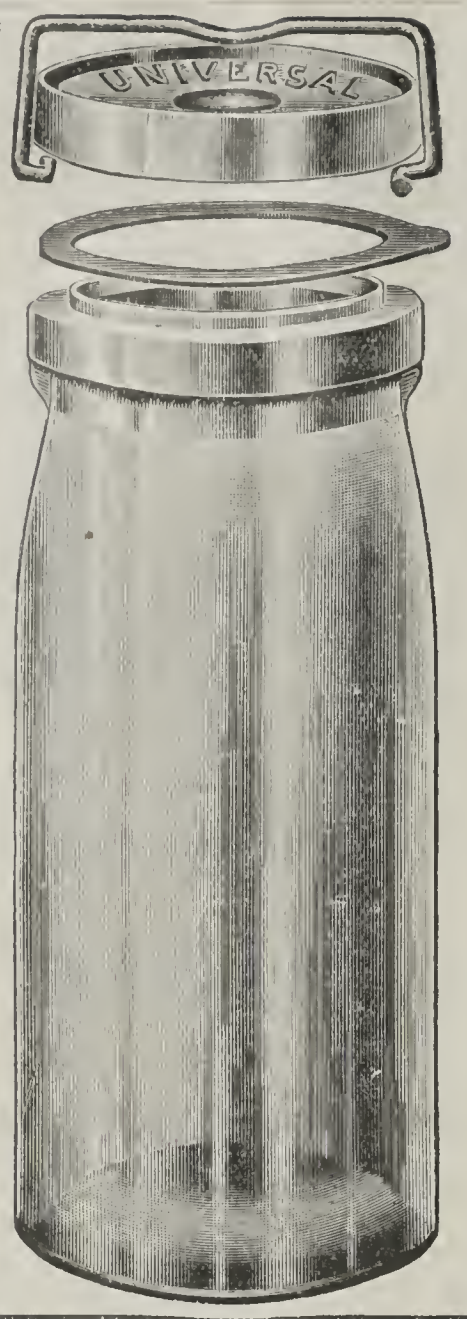
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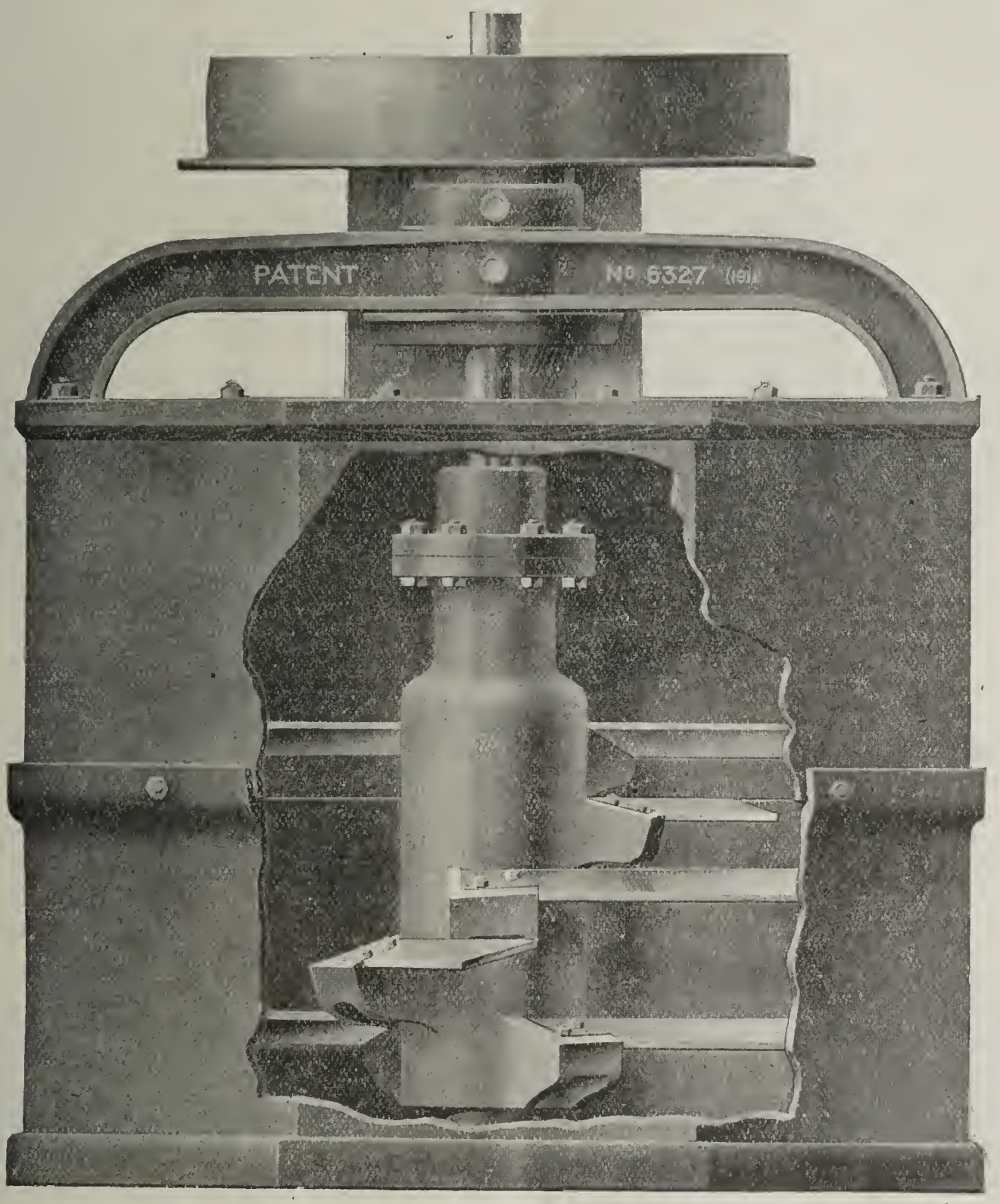
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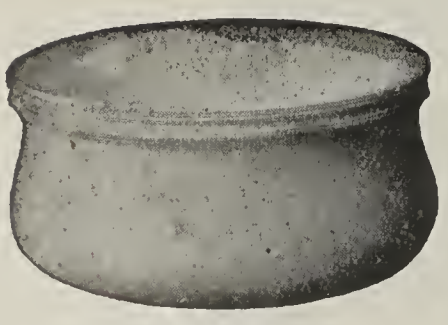
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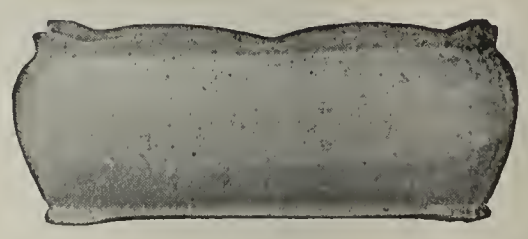
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Editorial Notes.

RETAILERS' SPECIAL WINDOW DISPLAYS.

DURING the last few years the science, or art, of window dressing has undergone great developments, and the Special Display has been recognised in many trades as a potent bringer in of business. Owing, perhaps, to the inherent attractions of pottery and glass, many dealers in these goods have dropped somewhat behind the times, and have not troubled to devise special arrangements for showing goods which possess such naturally decorative qualities. Some few dealers, however, and especially certain of the stores who employ trained window-dressers, have been continually on the look out for new schemes for drawing attention to their windows, and have reaped a goodly recompense therefrom. For a few admirable examples of what may be done in this way we would commend to our readers' notice the letter from South Africa, appearing in our Correspondence Columns this month. We hesitate to add to our correspondent's excellent suggestions, but would like to emphasise once more the advantage of exhibiting pottery and glass in situ by furnishing a small window as a dining-room, bedroom, or kitchen, with suitable services displayed and plainly priced. The necessary furniture can usually be borrowed from a local dealer, if a few of his cards are shown in the window; or, if this cannot be arranged, the residential part of the establishment can often be relied upon to contribute the articles required. This class of display is all the more easy now that some manufacturers are producing special lines of ware to harmonise with particular styles of furnishing. The one-colour window idea is also excellent, and it may be extended to include some harmonious blends such as blue and white, red and white, red, white, and blue, and so on. Other devices will, no doubt, occur to enterprising dealers when once they have adopted the valuable principle of Special Window Dressing.

STATE AID FOR CLAY RESEARCH.

LIKE the well-known reference to "Snakes in Ireland," the heading to this note evokes the remark, "there isn't any." We might inquire further, "Why not?" But we should have to wait a long time for a satisfactory answer. It is all too evident that our Government departments are decidedly slow to undertake technical research work, preferring to leave the initiative to the industries more particularly concerned. Samples from the uttermost parts of the earth can be examined at the Imperial Institute, and abstruse scientific problems worked out at the National Physical Laboratory, but the common clays, which, as was pointed out at the annual meeting of the English Ceramic Society, are the basis of so many important industries, receive very little attention—though, in this respect, we would not belittle the

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useful work which has emanated from Jermyn-street from time to time. The broad fact remains that, however desirable State aid for clay research would be, it is not likely to be forthcoming, and manufacturers in all parts of the country must rely on their own efforts for the carrying out of investigations which are likely to be of vital importance in the future. To this end, they cannot do better than by extending their fullest support to the English Ceramic Society and to the new School of Science and Technology at Stoke-on-Trent.

EXPORTS AND IMPORTS IN APRIL.

THE pottery exports for April, despite the lower levels recorded in certain individual markets, were satisfactory in the aggregate. This reached £285,300, compared with £171,916 in the same month of 1912, and £246,729 in 1911. The tremendous increase over April of last year is, of course, accounted for by the coal strike, which showed its effect more in that month than any other. Consequently, for critical comparison, the figures of twelve months ago are quite valueless. On the previous month (March) the total shipments show an increase of nearly £10,000, the figures being £275,590. The really gratifying feature of the month's trade was the business done with Canada, the March figures of £38,894 having bounded up to £46,351, which is practically £20,000 more than in April of 1911. As against this improvement, business with the United States, after its temporary advance, fell to £30,349, a decrease of about £8,000, both on the previous month and on April of 1911. The disturbed condition of American trade, owing to the Tariff Bill, and the natural reluctance to buy in face of prospective reductions in duties, doubtless account for this. The Brazilian trade was practically the same as in the preceding month, at £24,516, but the Argentine advanced from £22,885 to £27,285. The British East India business was also on a better level a £23,978. Trade with the Antipodes was again unsatisfactory, and lower than in March last. The combined figures for Australia and New Zealand reached £37,383, as against £39,748 in March last and £33,163 in April of 1911.

The South African shipments were of the value of £11,066—over a thousand pounds below the previous month's figure. The Continental business was better than for some months past. In regard to descriptions of goods, there was an advance of £8,000 in earthenware, as compared with April, 1911; an increase of £11,000 in sanitary ware, and an advance of over £1,000 in china. The aggregate exports for the first four months were £1,118,040, as against £925,153 in the corresponding period of 1912 and £992,078 in the same period of 1911.

The imports for the month were of the value of £96,784, as against £73,187 in the same month of 1912 and £99,151 in 1911. Deducting re-exports, the net imports for April were £85,976. The four months' imports reached £339,681, as against £297,173 in the corresponding months of 1912 and £329,251 in 1911. Deducting re-exports, the net imports for the four months were £307,395.

PATENTS AND TRADE MARKS IN THE UNITED KINGDOM.

THE thirtieth report of the Comptroller-General of Patents, Designs and Trade Marks, dealing with the year 1912, has just been issued. In dealing with the trend of invention, the report states that the first automatic telephone exchange for public use in this country was opened at Epsom during the year, and now that the supersession of manual exchanges has become a practical question of future development, much inventive ingenuity is being devoted to the subject, more particularly to the difficult problems of junction and trunk line working, and to semi-automatic and other methods for facilitating the gradual introduction of automatic systems.

As a result, apparently, of the Insurance Act there was a great increase in the number of appliances for damping and affixing adhesive stamps. Also many applications were received dealing with machines for photographically reproducing a large number of copies of a single design on one plate, to be used subsequently for printing sheets of stamps or other designs.

The general business of the office is summarised as follows:—Applications (29,353), 30,089; Specifications, sealed (17,164), 15,814; designs registered (41,581), 42,077; trade marks registered (4,868), 4,942. The totals for 1911 are given in brackets for comparison.

The number of designs classed as "articles of glass, earthenware, bricks, cement, &c., amounted to 606, besides 97 sets. The number of trade marks registered, in 1911 and 1912 in the classes dealt with by this GAZETTE was:—Class 15, glass (27) 29; Class 16, porcelain and earthenware (39) 44.

RAILWAY RATES.

THE announcement that after July next an increase of 4 per cent. is to be exacted on all goods traffic by railway throughout the kingdom—with the exception of coal—has been received with something like dismay by the trading community. In dealing with this matter of railway rates on former occasions, we have pointed out how seriously our trade is already handicapped by the much higher than Continental rates which prevail throughout the country, and insisted that what is needed most urgently is a general reduction in the cost of transport. It is perfectly clear that this great want will never be satisfied under the existing railway system, and the present move on the part of railway management shows that those in authority are quite blind to the exigencies of the case. It was felt, when that unfortunate Government promise was made to facilitate the settlement of the railway strike, that serious loss to the trading community was likely to ensue, and now we are face to face with the trouble. It is, of course, required of the railway companies that they shall show the proposed increase to be "reasonable" in the legal sense of the word, and no doubt efforts will be made by the Chambers of Commerce to combat the reasonableness of the proposition; but experience in these matters leads us to fear that the companies will have their way, and that the 4 per cent. addition to rates, already much too high, will be enforced. The trade of the country is now suffering the usual penalty for permitting a gigantic monopoly to consolidate its power, and the way of escape is not to appeal for mercy, but to declare war. The railway companies must be taught that increase of rates does not mean larger profits, but exactly the reverse, and that the only legitimate method to increase dividends is to give more service. The time is opportune for enforcing this great lesson. An alternative system of goods traffic is growing up already, and its growth might be swiftly accelerated if the great trades of the country would take it up systematically. A vast trade like that of cotton, for instance, might arrange its own traffic system by motor haulage: it is merely a question of initiative and capital. The capital could no doubt be found easily enough amongst the two millions of people directly and indirectly interested in the cotton industry,

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and although some time must elapse while the motor wagons were being constructed, and the railway system must be used for a time, in a very few years the whole of the cotton traffic would be taken away from the railways. We select this particular industry because it is a favourable one with which to make a beginning. The business lies in a restricted area, and the distances are comparatively short. About 20 miles is the average distance for moving raw cotton and manufactured cotton goods, and the extra cost per mile of the motor haulage is, for that distance, compensated by the saving in handling which results from taking the goods from door to door; but the system would soon spread to other trades. The Birmingham district affords another opportunity, and the hardware trades would soon follow the example of cotton. For long distance traffic the railways will probably have a great economic advantage for many years to come, but this will not matter much if the attack on the short distance traffic is carried out, because the loss of so much custom will force the railways to give more consideration to the interests of trade, and induce them to offer concessions in order to prevent further diminution of their area of usefulness.

With regard to the amount of increase proposed by the companies, it is fairly evident that it is greater than the actual cost of the concessions wrung from them by the late strike, even if it be admitted that what they then gave did not bring them in any return in the way of better work from their servants. Our view has always been that a betterment of the conditions of employment pays for itself in greater efficiency of labour, and the whole history of commercial development goes to prove the truth of this theory; but should we be forced to admit that the increase in wages, &c., was a dead loss to railway shareholders, certainly a $2\frac{1}{2}$ per cent. advance on the whole of the goods traffic would have covered it. Perhaps the companies have put on the extra $1\frac{1}{2}$ per cent. so as to have something to bargain with, and in this case we may hope that the final settlement will be on a basis of not more than 3 per cent. But in any case, and whatever the extra charge is to be, the trading community will do well to shake itself free from the tyranny of railway monopoly; while the companies will also be wise to consider, before they further irritate the traders of the country, whether the fateful words, "Mene, Tekel, Upharsin," are not already written on the walls of the railway clearing house.

Earthenware and Pottery of common varieties to the weight of 35,382·9 metric tons was imported into France during the first quarter of the current year. The figures show a substantial increase.

Feldspar in the United States.—The principal use of feldspar is in the manufacture of pottery, enamel ware, enamel brick and tile, and electrical ware. Of these applications the most important is its use in the body and glaze of the various grades of pottery and vitrified sanitary ware, in which it constitutes from 10 to 35 per cent. Its value in pottery is that it melts at a lower point than the other ingredients, and serves as a flux, binding the clay and quartz particles together. In glazes the percentage of feldspar used is higher than in the body, and runs from 30 to 50 per cent. Small quantities of the purest grades of potash feldspar are used in the manufacture of artificial teeth. For this purpose it brings the highest prices—from $6 to $8 a barrel of 350 lbs. The production of feldspar in the U.S.A. in 1912 was 86,572 short tons, valued at $520,562. This was a decrease from 1911 of 6,128 tons in quantity and of $58,446 in value.

BOY LABOUR IN GLASS WORKS.

(BY A MEMBER OF OUR STAFF.)

SINCE the report issued some time ago by the Departmental Committee appointed to inquire into the subject of night employment of male young persons in factories, a good deal of uneasiness has been experienced by those employed throughout the glass trades as to what will be the ultimate outcome of it all. The recommendation of the Committee in that part of their report dealing with the flint glass trades (p. 17) is "that the age of boys working in glass-houses should be raised to 15 years now and 16 years in 1916, also that it should be made illegal for boys to work on a night shift for a louger period than a week at a time." In past issues of THE POTTERY GAZETTE we have endeavoured to keep our readers in touch with the course of events, and as the subject is undoubtedly one of vital importance to the English glass industries we may be pardoned for once more making a reference to it.

Eighteen months ago, in reviewing the position, we called attention to the evidence given before the Committee by Mr. J. Silvers Williams-Thomas, of the firm of Stevens & Williams, Ltd., Brierley Hill, who was appointed to give evidence on behalf of the flint glass manufacturers. It will be remembered that that gentleman pointed out that so far as he could ascertain there were about 1,000 boys employed in the flint glass trade, four-fifths of whom would be under eighteen years of age. These were employed on the night and day turns in cleaning blowing-irons, holding moulds, carrying finished glass into annealing ovens, occasionally gathering molten glass from the pots or crucibles, and generally waiting on the glass-makers in the set with which they worked. It is absolutely essential that after the glass has been melted, and ready for working, that the work must be continuous until all the pots are empty. Any cessation would be most detrimental to the purity of the glass, and endanger the standard of production which has so long been associated with English glass. If the age limit was raised it would, he said, make it exceedingly difficult and awkward for the workmen, who could not do without the boys. The adoption of a higher age would, he affirmed, very seriously add to the cost of production and make it much more difficult for the manufacturer to take orders. A large number of glass works had been closed on account of their unremunerative character. He also contended that the raising of the age limit would seriously tend to lower the standard of efficiency. He argued that some of their best workers, to-day, started in the glass trade when ten years old.

Mr. Thomas, in his evidence, further stated in reply to questions asked by the Committee as to the hours the boys were employed, that they worked in turns of six hours with meal intervals of half an hour in the turn. When eight turns per week were worked there were three days—Sunday and two others—free for recreation and improvement. In regard to health Mr. Thomas observed that in his 47 years' experience in the flint glass trade he had never known a boy to suffer ill effects through working in a glass-house. On the other hand, there were boys who, on leaving the elementary schools, had only just been able to pass the doctor, who had in the glass-works grown into strong, healthy men. As to education, when boys left the elementary school at the age of fourteen and entered the glass-house, it was generally recognised that they were really attending technical classes, inasmuch as they were fitting themselves to become glass workers. In this respect they had far better opportunities for progress than when, as in the case of the technical

The Proboscis & Foot Pad of the House-Fly



PROBOSCIS OF HOUSE FLY SHOWING TUBES



HOUSEFLY IN THE ACT OF REGURGITATING LIQUID FOOD. SUCH A DROP WHEN DEPOSITED FORMS A VOMIT SPOT.



FOOT OF HOUSE FLY SHOWING PADS.

THE HOUSE FLY CANNOT BITE, AND CAN ONLY TAKE ITS FOOD IN A LIQUID FORM.

It has been proved by experiment that the fly has a habit of regurgitating food from its crop down through its proboscis, mixing it with saliva for the purpose of moistening food material on which it desires to feed, reabsorbing the same several times. These vomit spots are to be noticed on window-panes, and, being of a lighter colour, can be distinguished from the faecal deposits, which are usually brown.

It does not require a very vivid imagination to picture what happens when a fly, glutted with a meal from the sputum of a tuberculous patient in the district, flits gaily on to the sugar on your tea-table, from the dustbin, or more indescribable filth! To taste your sugar, your cake, &c., he *must vomit on it*, and not once, but several times, re-absorbing the fluid, and wandering to fresh spots, leaving traces of the contents of his contaminated crop. The glutinous pads on his feet are contaminated by the substance from which he has just flown. The bristles of his legs and body all help to distribute some undesirable filth, with probably pathogenic bacteria included therein.

It has been proved by experiment that flies will infect a sterile agar-plate by simply walking across it, and, what is more important, it has been proved that they hold bacteria in their interior for several days, and distribute them by vomiting and faecal deposits.





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class, they could only have apparatus put before them in miniature. A number of other very important points were raised by Mr. Thomas in his evidence.

The testimony of Mr. W. Bradford, on behalf of the National Society of Flint Glass Makers, was equally strong in favour of the present conditions of working being allowed to continue. No ill effects, he said, could be traced to night work in the case of boys under eighteen, and an inspection of them would show that they were, if anything, above the average in health and physique. The recommendations of the Departmental Committee, if put into effect in regard to night labour, would, he said, not only hit the manufacturer in such a way as to paralyse the glass industry by so increasing the cost of production as to jeopardise its existence, but it would be unjust to the boys, compelling them to work only half-time, and limiting their wages to about half what they received at present. Over and beyond this, it would prevent the boys from properly learning their trade during the years in which they were best fitted to do so. The best and most skilled of the glassmakers of to-day began to work at twelve and even ten years of age. A modern, well-ventilated glass works was, he suggested, a very healthy place; its normal temperature varied from 70 to 78 deg., seldom rising above the latter. The flint glass trade laboured under many disabilities, and he trusted that no further restrictions would be imposed upon it.

In spite of such evidence as that referred to, the Departmental Committee subsequently made the recommendation embodied in the first paragraph of the present article, the result of which has been not only a feeling of considerable uneasiness amongst the masters, but amongst the men and boys. Knowing this to be the case, and recognising how extremely important to the industry the question is, the writer was caused to visit South Staffordshire recently specially in order to find out the present position of the matter. At the time of this visit we were aware of two meetings having been held on Jan. 6 and 20 by a Sub-Committee consisting of Mr. J. Silvers Williams-Thomas, Mr. Congreve Jackson, and Mr. W. H. Stuart (representing the manufacturers), and Mr. J. Husselbee, Mr. J. Bell, and Councillor W. Bradford (representing the operatives), and we were also aware of a decision which had been arrived at to call a meeting of the whole of the glass trades, including manufacturers of table glass, bottle glass, and plate glass. This meeting was to have been held at Derby, but in consequence of correspondence which has recently ensued between the representatives of the glass trades and the Deputy Chief Inspector of Factories at the Home Office, the writer learned that the suggested Derby meeting has been abandoned. It appears that a memorial letter was addressed to Mr. McKenna, Secretary of State, and as a result of that a communication has now come to hand from the Deputy Chief Inspector of Factories which amounts practically to an assurance that the question has been temporarily shelved. This important letter contains the following announcement:—

"As you are aware, legislation will be necessary before any alteration can be made affecting the ages at which young persons are employed in glass works. When such legislation is proposed other points will no doubt arise and additional information will be required. Further visits of inspection will then probably be necessary."

From this it does not seem likely that any attempt at legislation will be made until the question is reopened by the Home Office officials, and until the fund of information at the disposal of the Government has been considerably amplified. This being the case, it was wisely decided that no action on the part of the glass manufacturers and operatives is necessary for the time being, and consequently the Derby meeting was immediately cancelled by the secretary of the Sub-Committee which had the matter in hand.

Being anxious to ascertain the true feeling of the operatives, the writer, when in South Staffordshire, took an opportunity of calling upon Mr. John Husselbee, the General Secretary of the National Flint Glass Makers' Association of Great Britain and Ireland. That gentleman is thoroughly in agreement with the evidence laid before the Departmental Committee, both by the manufacturers and the men, and he is strongly of the opinion that any change in the direction indicated will be disastrous to the interests of both masters and men. "Are you expressing merely a personal view," I asked, "or is this the general opinion of the men?" "Oh, the latter, certainly," replied Mr. Husselbee. "The district secretaries had a vote taken, and the men generally are strongly opposed to the suggested legislation. They consider that the recommendation is ill-advised, and would be prejudicial to the trade on all hands. Ours is a peculiar trade. The flint glass trade particularly requires very skilful manipulation, and we all consider that the suggestion of the Committee, if given effect to, would rob the apprentices of their most fruitful period of learning."

Now if one side only were averse to the proposed alteration one could hardly be surprised at Government measures to put matters on a satisfactory basis, but when both the manufacturers and the operatives are convinced that their interests will be vitally affected by the suggested change, it would seem that due regard should be paid to a solid appeal such as that which has been made to the Secretary of State, and which was signed in equal numbers by representatives of the manufacturers and the men. We certainly feel that it would be a hazardous policy to impose restrictions upon British glass manufacturers such as are not encountered by the glass manufacturers of other countries. It is, therefore, with much pleasure that we have learned that, at any rate for the time being, nothing further is to be done. The South Staffordshire people, at all events, fervently hope that the Government papers will get so dusty as to become undecipherable.

THE SHOPS ACT AND EARLY CLOSING.

MALDON (Essex) Town Council have made an order fixing Wednesday as the early closing day for the glass and china trade. A vote is to be taken on a general order for closing on Monday, Tuesday and Thursday at 7 p.m.; on Friday at 8 p.m.; and on Saturday at 10 p.m.——Orders suspending half-day closing for the glass and china trade during June, July, August, and September have been made at Great Yarmouth and Sandgate (Kent).——Devon County Council on May 16 issued an order for glass and china dealers at Ottery-St. Mary to close on Wednesday at 1 p.m.——Under an order issued on May 9, glass and china dealers at Stanford-le-Hope (Essex) are to close on Wednesday at 1 p.m.——At Bury (Lancs.) the Town Council have taken a vote of the glass and china trade respecting a general closing order. Seven voted for an order, and a similar number against, while one other voting paper was marked void. Consequently no order will be made.——Chorley Town Council on May 2 issued a draft order for glass and china dealers to close at 8 p.m. on Monday and Thursday; 8.30 on Tuesday; 1 p.m. or 7 p.m. on Wednesday; 9 p.m. on Friday; and 10 p.m. or 1 p.m. on Saturday; with optional closing on the day before Good Friday and on Dec. 24 and 31.——

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Ealing W. Town Council, as the result of a vote, have made an order fixing Wednesday as the early closing day for the glass and china trade, with Saturday as an alternative day.——Cumberland County Council have made an order suspending half-day closing for the glass and china trade at Silecroft, which is a holiday resort, during June, July, August and September.——At Wrexham, Wednesday has been fixed as the early closing day by the Corporation for glass and china dealers.———Essex County Council on May 9 issued an order for glass and china dealers at Witham to close at 1 o'clock on Wednesday.——At Ashford (Kent) the Urban Council on May 8 issued a confirmatory order for glass and china dealers to close on Wednesday at 1 p.m.—Lanes. County Council on May 3 issued orders for Wednesday closing for the glass and china trade at Heysham, Horwich, and Little Lever.——Wednesday closing orders for glass and china dealers have been made at Littlehampton (Sussex) and Barnstaple, and one for Thursday at Mansfield for the area to the west of Cock-lane and Debdale-lane, and Wednesday for the area to the east of those thoroughfares.——Staffs. County Council have made an order for glass and china dealers at Smallthorne to close at 8 p.m. on Monday, Tuesday and Wednesday ; 1 p.m. on Thursday ; 8.30 p.m. on Friday ; and 10.30 p.m. on Saturday, the latter hour to apply also to the day before Good Friday and the day before Christmas Day.——At Dunstable the Town Council have decided to take a vote of the glass and china trade on a closing order, the hours in which are to be, Monday, Tuesday and Wednesday, 8 p.m. ; Thursday, 1 p.m. ; Friday, 9 p.m. ; and Saturday, 10.30 p.m.——On May 17 the Southport Town Council issued a draft order for glass and china dealers in the town wards at Birkdale to close at 8.30 p.m. on Monday, Wednesday and Thursday ; at 1 p.m. or 8.30 p.m. on Tuesday ; at 10 p.m. on Friday ; and at 11 p.m. or 1 p.m. on Saturday. Objection or suggestions relating to the order must be sent before June 17 to the town clerk, Mr. J. Ernest Jarratt.——Mansfield Town Council have decided to fix Wednesday as the early closing day for the glass and china trade, but for the Pleasley Hill district a vote is to be taken as to whether Wednesday or Thursday shall be fixed .——Stoke-on-Trent Rural Council on May 16 issued an order fixing Thursday as the early closing day in the Council's area.

Cardiganshire County Council have issued draft orders affecting glass and china dealers at New Quay, Aberayron, and Borth. At New Quay the closing hours are : Sept. 1 to June 30 inclusive, Monday, Tuesday and Thursday, 7 p.m. ; Wednesday, 1 p.m. ; Friday, 8 p.m. ; Saturday, 10 p.m. ; July 1 to Aug. 31 inclusive, Monday, Tuesday, and Thursday, 9 p.m. ; Wednesday, 1 p.m. ; Friday, 8 p.m. ; Saturday, 10 p.m. Half-day closing on Wednesday is to be suspended from July 31 to Aug. 31 inclusive, but on that day for that period business is to be suspended at 9 p.m. At Aberayron the scheduled hours of closing are Monday, Tuesday, Wednesday, and Friday, 8 p.m. ; Thursday, 1 p.m. (7 p.m. from July 15 to Sept. 15 inclusive) ; Saturday, 10 p.m. And at Borth 8 p.m. on Monday, Tuesday, Thursday, and Friday ; 1 p.m. on Wednesday (7 p.m. from July 1 to Sept. 30 inclusive) ; and 10 p.m. on Saturday. Objections or suggestions must be sent to the Home Secretary before June 13.——Chester County Council on May 23 issued orders for Wednesday closing at 1 p.m. by the glass and china trade at Runcorn and Nantwich, and Thursday at Hatherton.——On May 22 the Bedwellty Urban Council issued a draft order for dealers in earthenware and glass in the Sirhowy Valley portion of the town to close at 7 p.m. on Monday, Tuesday, and Wednesday ; 1 p.m. on Thursday ; 9 p.m. on Friday ; and 10 p.m. on Saturday, with midnight on Saturdays preceding Bank holidays. Objections or suggestions relating to the order must be sent to the Clerk, Mr. T. J. Thomas, 36, High-street, Bargold, before June 27.——Orders suspending half-day closing for all trades during July, August, and September have been made by the Norfolk County Council for Bacton, Caister, Cromer, East Runton, Happisburgh, Heacham, Horning, Mundesley, Ormesby St. Michael, Pulling, Potter Heigham, Ranworth, Stalham, Stokesby, South Walsham, Sheringham, Wroxham, and Hoveton St. John, and from June 15 to Sept. 15 inclusive at New Hunstanton.——Cornwall County Council have been asked to make an order for glass and china dealers at Camborne to close at 7 p.m. on Monday, Tuesday, Wednesday, and Friday ; and 10 p.m. on Thursday and Saturday, leaving the selection of the early closing day to individual traders.

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.

MARBOLA. 350,953, Also **OPLEX.** 350,957. All goods coming within Class 15. Siemens Bros., Dynamo Works, Ltd., Caxton House, Tothill-st., S.W.

CALLA. 350,859. Glassware included in Class 15. The British Thomson-Houston Co., Ltd., 83, Cannon-st., London, E.C.



351,193. Glass included in Class 15 used in connection with lighting apparatus. Falk, Stadelmann & Co., Ltd., 83, Farringdon-road, E.C.

CAVTIGAGE. 349,990. Bricks, tiles, quarries, hearths, chimney pots, tops, caps and cowls, all made of earthenware, and articles made of fireclay. Class 16. Sparrow Lunt & Co., 11, Bowling Green-street, Leicester.

AMORA. 350,726. Also **AMORIT.** 350,727. Objects of art included in Class 16. "Amora" Manufacture d'Objets d'Art en Biscuit et Terre-Cuite Société Anonyme, 28, Rue des Ursulines, Brussels, Belgium. Address for service within the United Kingdom is, c/o H. Haddan & Co., 31 and 32, Bedford-street, W.C.



350,433. Porcelain and earthenware. Class 16. Compagnie Française de l'Afrique Occidentale, 75, Whitworth-street, Manchester.



350,504. Sanitary goods included in Class 16 made in England. Johnson Bros. (Hanley), Ltd., Eastwood-road, Stoke-on-Trent.

Belgian Glass Exports during the first quarter of the current year comprised :—Window glass, 53,530,800 kilos. ; plate glass, 10,938,400 kilos. ; other glass and glassware, 10,118,300 kilos. An increase is recorded in each case.

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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

Booths, Ltd., Church Bank and Swan Bank Potteries, Tunstall, in the progress of research during three-quarters of a century, have won an honoured name in regard to ceramic productions, and they now enjoy a business of huge dimensions transacted over the greater part of the known world. Established in a very humble way at the old Knowle works in the year 1841 by the late Thomas Booth and William Evans. the original partners at the end of ten years' trading—at that time mostly export—found it necessary to embark upon larger premises on the site of the present Church Bank pottery, and their attention was then turned to the home trade. After acquiring real distinction in the manufacture of art tiles the energies of the firm were directed to the manufacture of high-class tableware, and so much progress rewarded their efforts in this direction that at the present time, and indeed for a long time past, Booths, Ltd., have been regarded as one of the principal tableware houses. It is a mistake, however, to suppose, as some do, that they are merely manufacturers of dinnerware, for, as a matter of fact, at the present time they offer the buyer an extremely wide range of beautiful productions, amongst which are many of a distinctly ornamental nature, and a host of designs which cannot help but appeal to lovers of the refined and artistic. Their famous "Silicon" china—really a fine opaque earthenware—was introduced very shortly after the conversion of the business into a private limited company in 1898, and it has deservedly become a household word. The designs which are being continually adapted to it are all chosen on well-considered lines, and amongst them are many emulating the earlier productions, which, it is recognised, possessed a peculiar grace and charm, causing them to be so much admired and greatly sought after by our forbears. Some of these replicas, of which in the "Silicon" china there is a wide range, are now so well known as to render even their mention almost unnecessary. There is no mistaking the success which has attended the reinstitution of some of these early eighteenth century designs, and this has not been due merely to a prevailing craze for the antique, but to a judicious recognition of the fact that a couple of centuries' additional experience in the realm of ceramics has, with few exceptions, failed to produce anything more beautiful in character and more lasting in charm and grace than some of these productions of the pioneers of the industry. Probably this is accounted for to some extent by the fact that the spirit of commercialism did not enter so largely into the life of the earlier producers as it necessarily does to-day. Be that as it may, there is no gainsaying the fact that the public has been specially appreciative of the efforts that have been made to reproduce some of these earlier works of art, and Booths, Ltd., may be counted amongst the few manufacturers who have played a very important part in educating the public in this direction. In order to obtain the very best possible effect in the production of these replicas and to secure all the distinctive character and beauty of the original designs, the firm has thought it advisable to resort to all the old methods of hand production in these particular patterns. Every factor and circumstance which contributed to make the old pieces graceful and beautiful has been preserved. The old shapes, with their wealth and minuteness of detail, have been faithfully remodelled, and nothing that could be done has been left undone to secure a worthy rediscovery of the ancient masterpieces. The firm's scale blue design, the correct colour of which was only secured with almost insurmountable difficulty, cannot fail to win the unstinted approval of an art-loving public. Their well-known "Peony" and "Exotic Bird" designs are also things of real beauty, and it would be almost superfluous to say much about them here, seeing that they have already told their own tale in the popularity they have deservedly achieved. A leading feature of the firm's efforts for some considerable time has been the reproduction of some of the beautiful old blues. Their "Pompadour" and "Real Old Willow" patterns are amongst some of their most complete successes, and they are met with wherever one goes. It is interesting to note that,



OLD DUTCH DESIGN : BOOTHS, LTD. [*Photo. by "The Pottery Gazette."*

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encouraged by the success of these designs, Booths, Ltd., have now brought out a very fine reproduction of a beautiful "Old Dutch" design, an original example of which is to be seen in the South Kensington Museum. The success of this design has been spontaneous; indeed, it bids fair to eclipse all previous efforts. It was intended that this design should be out in time to include it in the exhibition arranged for the benefit of the King and Queen on their recent visit to the Potteries, but the work entailed in its institution was unfortunately too great. However, it is now on show, and it is a really charming design. A special feature of the pattern is the inclusion in it of an underglaze red which, it is claimed, has hitherto not been associated with English pottery. Our illustration strives to show a number of pieces in this design. It is, of course, impossible to convey an adequate idea of the distinctive merit of the pattern in a simple black and white illustration, but experience of Messrs. Booths' previous efforts with other old-time patterns will doubtless supply what is lacking. It only remains to be mentioned that the price of the pattern is extremely moderate; as a matter of fact, pretty much the same as the price of the "Pompadour" pattern, which is now universally known in the trade. The buyer at home or abroad who has not yet become acquainted with the productions of Booths, Ltd., we should consider is certainly very much behind the times. Their London agents are Green Bros., of 49, Hatton-garden, E.C., where an excellent range of patterns is always on show.

The Royal Art Pottery Co., Longton, are very extensive makers of art wares for home and export, and they offer some unique and attractive lines at very moderate prices in flower-pots, pots and pedestals, clock sets, vases and the like. Calling some time ago at their Longton works I was shown through their large warehouses and showroom, and was at once impressed with the proportions of their turnover in the lines mentioned. The majolica warehouse, the contents of which I was interested to observe they were then engaged in transferring practically wholesale into railway trucks standing by, contained a huge assortment principally of flower-pots, and pots and pedestals, in all shades of plain and art majolica decorations, amongst which a sage-green self-coloured glaze was particularly in evidence. This colour has a very even body, and takes a good solid glaze, causing it to have a capital effect in the finished article, especially in the plain shape flower pots. I noticed a special line in bulb bowls. The season is, of course, now rapidly coming on, and it may be interesting to note that the Royal Art Pottery Co. have a very good sale for bulb bowls in various shapes and sizes. They also supply the bamboo hanging pots and chains in complete suites, viz.:—Top pot, centre pot, three hangers and chains. This is a good and cheap line and commands a ready sale. The firm has always quite an unique range in pots and pedestals, which, however, is only natural, considering the very wide market to which their goods appeal. I noticed a new and cheap line in the Stag shape flower pot, majolica hand-painted, a very good substantial pot. In the showroom I was shown some very interesting items in vases at remarkably low prices. Amongst the newest and most attractive were the "94 Waterlily" decoration, finished off in dark brown and gold, the Devon centre pot and stand, specially suitable for use as a centre vase for table decoration, and the "72 Rose" design, treated also in brown and gold. The rose in this pattern is particularly well done. It will be seen that I have twice mentioned brown and gold as finishing treatments. Apparently the prevailing fashion for brown has extended even to art pottery, and I am told that the manufacturers can hardly fill the orders for brown fast enough. Whether it is merely a coincidence I am unable to say, but the fact remains. "The Reapers" is another good decoration, and finished off in dark green and gold looks very well. This pattern is finished off by the men, and this fact is quickly distinguishable by its superior tone and finish, it having a soft and pleasing appearance. The reaping scene subjects in this design are, of course, varied, making it a very interesting pattern. In their collection of new shapes and patterns the Royal Art Pottery Co. have some very attractive lines. Everyone knows, doubtless, that their goods appeal to the million, and are intended to be within the reach of all. It is on this basis that the company's huge turnover has been secured; the secret of their success is that they have something to interest the most slender pocket. That, however, does not prevent the firm from supplying some very good lines. Some of their light decorations with front solid handles are marvellously cheap. As to the dimensions of the business I think few have any real idea, and the best and only way to get to know it is to become acquainted with it in a practical way. Their City showroom is at 10, Holborn-circus, E.C.

Kilner Bros., Ltd., 27, G.N. Goods Station, King's Cross, have become well known for their "Kilner" fruit jar, for which they claim support because it is a first-class article and of English manufacture. They have now supplied this jar in several sizes for the past four seasons without, we are told, having received a single complaint of failure of any kind, and this fact gives them every confidence in offering it to the public at the commencement of the fifth season. The practice of fruit bottling is rapidly and extensively growing, and little wonder, when it can be done so cheaply and simply. The sound ripe fruit is merely put into the jars, packed as closely as possible, and filled up with water. The rubber ring, glass lid and screw band are placed in position on the mouth of the jar, and the band screwed part way down only, so as to allow the air to escape as the temperature rises. Simple sterilising is then resorted to, on the completion of which the screw band is tightly screwed down, when the glass lid becomes tight and secure. The closure is caused by the vacuum created in the jar through the heating and cooling of the contents. Fruit thus treated will keep in good condition for quite a long time. To re-open the jar it is merely necessary to remove the screw band, and insert a fork or other sharp instrument underneath the rubber ring, the inrush of air once more releasing the glass lid. Not only fruit but vegetables can be preserved in this way, and as the jars are obtainable in five sizes, 1, 2, 3, 4, and 7 lbs., there is every facility for putting them to the fullest possible use. The four smaller sizes have a 2 in. mouth, but the 7 lb. size has a 4 in. opening, and is, therefore, specially suitable to large fruit. The screw bands are lacquered inside and out to prevent rust, and every one of the glass lids is thoroughly tested at the warehouse before being sent out to ensure perfect fitting. Under these circumstances there is not the slightest reason to be apprehensive as to failure through misfit, which, of course, is a vital point in a hermetically sealed preserving jar. The history of the introduction of the 7 lb. jar is very interesting. The late Capt. Scott's Antarctic expedition required such a jar for the preservation of certain specimens, and approached Kilner Bros., Ltd., with regard to it. It was modelled at great expense, and a certain number supplied to the expedition, and it is to the South Pole heroes that the public are now indebted for a very useful size jar such as this is. Kilner Bros., Ltd., also supply the "Auto" fruit jars with two caps in sizes from half-a-pint to half-a-gallon. Every china dealer would do well, if he has not already done so, to make himself familiar with fruit preserving appliances, for sooner or later he is bound to be asked for them.

Wedgwood & Co., Ltd., Tunstall, are manufacturers of semi-porcelain and plain and decorated earthenware for all markets, and make a number of specialities. Their London representative, Mr. Frank Findlay, has a choicely displayed room at Gamage Building, Holborn-circus, where he has a magnificent range of toilet, dinner, and dessert ware. Particularly impressive is their present show of toilet ware on some quite new shapes, one of which is the "Art" shape. This is being shown in a number of decorations, and an outstanding feature of many of these is the mazarine blue for which they are known to be famous. We illustrate one of these. It has a wide band of mazarine blue, well down the ewer, and a narrower band at the edge. A choice gold print is applied to both bands, and a brown husk border of the same pattern as the gold print on the bands harmonises so well with the gold as to be almost indistinguishable from it, even when standing only a moderate distance away. The pattern is finally completed by lining off in gold at edge and foot and with a gold handle. Our illustration can only be in black and white; however, in conjunction with the foregoing description, it may help to convey an impression as to the effectiveness of the decoration, and in any case the pattern can itself be seen in Mr. Findlay's room. The new Paris shape from the brown so long considered to have been the best toning colour with gold. The innovation is successful, and in the 8696 pattern looks particularly well. Their 8622 design is also an achievement. It has extremely narrow mazarine blue borders with a correspondingly minute gold husk border print on the bands, and a gold festoon between the blue and gold borders. The cover dish in this case is square. So important is their dinnerware trade that it warrants the four centre tables and three sides of the room being apportioned to its display. In plain prints, and prints with gold edge, they have a splendid variety of patterns, quite a lot of which are of simple neat border designs; but although these form no doubt an important share of the trade, the firm also lay themselves out for richer decorations, such as enamels and gold, many of which are extremely choice. In addition to their staple lines in dinner and toilet, there are also on show numerous side lines in tea and breakfast ware, jugs, teapots, in fact, a complete suite of the ordinary everyday lines. On one special table is a display of vases fitted up for electric lighting. These are principally treated in mazarine blue and gold, but also in a variety of other effective decorations. A very important section of Wedgwood & Co.'s trade, which I certainly must not forget to



WEDGWOOD & CO., LTD. [*Photo. by "The Pottery Gazette."*

is on show in a splendid variety of patterns, amongst which the chintz designs, so popular at the present time, are well represented. A ten-sided service, recently modelled, is particularly suitable for a panel chintz effect such as has been applied to it in a number of different colours, each alternate panel having been given merely a neat spray in order to show up to better effect the full chintz on all the remaining panels. It offers a pleasing diversion from the all-over chintz decorations, which are sometimes rather too heavy even for the prevailing taste of the moment. We illustrate this decagon-shaped ewer, but in the case of our illustration the panels are treated with solid mazarine blue in alternate panels, on which is applied a fine burnished gold print border. The intervening panels are decorated with green and gold enamels, which, theoretically, would hardly be expected to tone with the mazarine blue of the other panels, but, in reality, offers a surprisingly harmonious effect. The newest shape in dinnerware is the "Parma," with a round footed cover dish. Two excellent patterns have been adapted to it in the higher priced services, giving the appearance of expensive china finishes. One of these has a quarter-inch scoured gold band, over which is printed a black key border print, and shouldering the band is a new grey print, which gets away mention, is their hotel and restaurant earthenware, for which they are peculiarly laid out. The showroom is most excellently arranged, and reveals the fact that it is specially cared for. I doubt not that it is also well visited, as it deserves to be.

J. Chomette & Son, 15, Hatton-garden, E.C., are proprietary agents for the firm of manufacturers, C. Pillivuyt & Co., Mehun, France, specialists in French fireproof ware for culinary purposes. This firm has obtained the highest awards at a number of the principal exhibitions. They specialise particularly in the manufacture of fireproof china, which is a hard French porcelain made from china clay, capable of withstanding very high temperatures without cracking, rendering it eminently suitable for employment in the manufacture of hygienic kitchen utensils. Having a highly vitrified leadless porcelain glaze, it is claimed to be a supremely satisfactory material for the manufacture of culinary articles, and the claims made for it appear to be thoroughly well established, for, in spite of a large and well-equipped factory, the firm is experiencing a larger demand to-day than at any time in its history. J. Chomette & Son have recently brought out an exceptionally fine new catalogue, in the compilation of which exceeding care has been displayed. A

feature of it is that it has been issued in the form of a trade list, subject to discount. It is a list so arranged that it can be placed in the hands of anyone inquiring for fireproof ware, and containing many illustrations and much descriptive information, it cannot fail to meet with splendid results. It also embodies new trade terms which come into operation on June 1. Those dealers who have not already seen it are strongly advised by us to do so, for it must certainly prove to be a very useful book to any china dealer who is in any way interested in culinary wares—and most china dealers are.

S. Dornberger & Co., Gamage Building, Holborn-circus, E.C., have a splendidly fitted-up showroom for the handling of all kinds of table glass, of which they are importers and factors, also useful earthenware and china. They are mainly concerned with importation, particularly in regard to useful and ornamental glassware, though they handle in addition a good quantity of Continental earthenware and china, and at the same time export British productions in the latter. The stands are very thoughtfully and conveniently arranged, and on a number of them are shown samples of suite glassware specially suitable for every-day use. They have a wonderful variety of designs in tumblers, water bottles, wines and decanters, also an extremely wide range of cheap lines in small vases, ornaments and tubes. The "Imperial" suite has, we understand, been a most successful one, so much so that the demand for a time was much greater than the supply, though this has now been rectified. In etched glass they have a large assortment of patterns at prices within the reach of all. Water bottles seem to be quite a speciality with them, and a wide choice is offered in the designs now on show. So far as china and earthenware is concerned, the firm is making a speciality of Continental china salad bowls, for which they have the sole selling rights in this country. There is a very cheap line on show in decorated earthenware vases, suitable for the million, amongst which are some art glazes with underglaze decorated ship subjects. Another line which is said to be going well is a mazarine blue band pattern, with imitation acid borders and painted subjects, at an extraordinarily low price. Shaded and lithographed ware is handled extensively, and trinket sets can be had in a comprehensive variety. A special room is set apart for a stock of china, and the firm has some three to four hundred cases, chiefly of china cups and saucers, continually in stock. In set jugs there is a startlingly cheap line, and here again orders can be supplied from stock. It will probably be a surprise to many to learn that a stock representing something like 3,000 cases is on hand at the present time at the Great Eastern Railway Co.'s wharves to the order of Dornberger & Co., which will show at once that in the majority of cases at any rate there is no necessity to wait long for delivery when placing orders with this firm. I specially noticed on my visit a cheap line of glass jars suitable to the use of confectioners, and as these are not universally available, it may be useful to put this information on record.

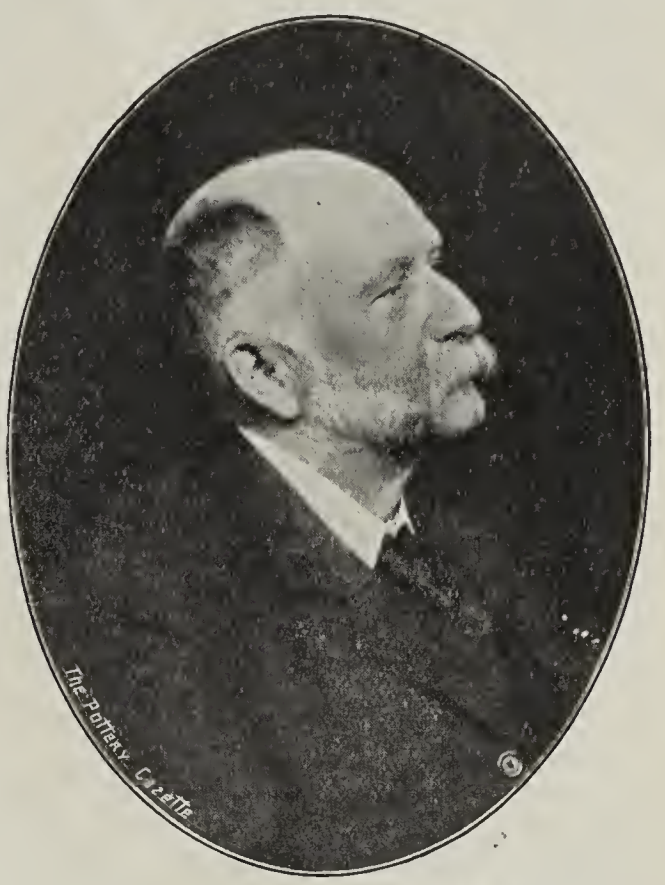
Russian Clayworkers' Congress.—Although there are over 5,000 brickworks in Russia, over a thousand tile works, thousands of potteries, &c., up till now there has not been held a clayworkers' congress in the country. Such a congress is now being convoked, says "Technika i Electritchestoo," by K. I. Bielavenetz Ugol. Zabalkan-Prospect, St. Petersburg, who is now forming a committee to give effect to the scheme, which it is hoped will include a clayworkers' exhibition.



Obituary.

MR. LAWRENCE WEDGWOOD, Aged 68.

WE have to record with very deep regret the death of Mr. Lawrence Wedgwood, of the Upper House, Barlaston, Staffs., chairman of directors of the firm of Josiah Wedgwood & Sons, Ltd., Etruria, which took place after a very short illness at his residence, on Monday, May 5. So utterly unexpected as it was, the sad event came as a great shock to all who knew him. Less than a fortnight before his death, the deceased gentleman had the honour, along with his nephew, Mr. Frank Wedgwood, to receive the King and Queen at the renowned works in which he played a very important part, and he continued for some days after that event to regularly visit the factory, as was his custom. He contracted influenza the Monday following the Royal visit, and afterwards remained at home, being attended by Dr. Craig. The end came, as stated, quite unexpectedly, and was due to exhaustion consequent upon the influenza.



[*Photo. by Swift, Burslem.*
MR. LAWRENCE WEDGWOOD.

Mr. Wedgwood's death has caused untold grief to the members of his family, and much consternation amongst a multitude of people who knew him and greatly respected him, for, although he was quite unostentatious in disposition, and avoided publicity, his personality won for him the respect and love of his workpeople, and the admiration of a wide circle of the local public. It was with much sadness that one witnessed the Union Jack, which a few days previously had gaily floated over the works in honour of the visit of their Majesties the King and Queen, now flying half-mast to signalise the passing away of the revered head of the firm.

The deceased gentleman, who was born on Oct. 24, 1844, was the son of Mr. Francis Wedgwood, J.P., of Barlaston, and was thus a great-grandson of the renowned Josiah Wedgwood, the founder of the firm. He was the last surviving of three well-known brothers, who, for many years, conjointly controlled the destinies of the firm, the other two being the late Mr. Godfrey Wedgwood, J.P., of Idlerocks, who died in 1905, and the late Mr. Clement Francis Wedgwood, of Barlaston Lea, who died in 1889, all master potters of Etruria. The three gentlemen were accustomed to ride on horseback to and from business together, and formed a congenial trio.

The late Mr. Wedgwood was a Churchman and a Conservative. He was for some time a churchwarden at

Barlaston Church, and he took a deep interest in the affairs of the village. To the Etruria works a considerable share of his life was devoted, and he personally controlled the mixings and attended generally to the work of the mill. He was always keenly interested in maintaining the traditional eminence of the old works by the canal, and a good deal in connection with modern development at the Etruria works must be credited to his efforts. His association with the staff and workpeople was always cordial, and the employees of the factory are all deeply grieved at his sudden death, and recognise that they have lost a good friend.

The deceased leaves a widow, three sons (Mr. Kennard Lawrence Wedgwood, Capt. Gilbert Wedgwood and Mr. Clement John Wedgwood) and a daughter (Mary Frances, Mrs. Hartley). At the time of Mr. Wedgwood's death, his eldest son, Mr. Kennard, was in America, where he is stationed, and his daughter, Mrs. Hartley, in Italy. Consequently the only children who were able to be present at the interment, which took place at Barlaston on May 8, were the second and third sons, Capt. Gilbert Wedgwood and Mr. Clement John Wedgwood.

The funeral was, as far as possible, of a private character, every effort being made to conform to the wishes of the deceased as far as it was possible for the immediate members of his family to interpret them. This being the case, the workers of the factory, who were wishful of showing their respect in the form of the usual floral tributes, readily embraced a suggestion from one of the officials that they should hand over the money raised for such purposes to the Heath Convalescent Home at Llanfairfechan, which it was agreed was a course which would have commended itself to the mind of the deceased.

The funeral service was of a most impressive though quiet character. The only mourners were the immediate members of the family, very near friends, and small deputations representing interests in which the deceased was directly concerned. The service was conducted throughout by the Rev. A. C. Oliver. The coffin, of plain oak, with brass mountings, bore the inscription, "Lawrence Wedgwood, died May 5, 1913, aged 68 years."

Undeniably the deceased will be greatly missed, both at Etruria and at Barlaston, and we join in the general sympathy with those who have lost a dear relative and a good friend.

MR. W. H. RICHARDSON, Aged 87.

WE regret to record the death of Mr. William Haden Richardson, of the City Glass Works, Glasgow, which occurred on May 13. Up to within a week of his death, the late Mr. W. H. Richardson was able to continue his keen and close association with commercial matters. In November, 1911, whilst in London on business, he contracted bronchitis, and following his return to Glasgow he never regained his former strength, and from that time was unable to leave the residence of his nephew at India-street, where he passed away.

Mr. Richardson was born in 1825, and was the eldest son of the late Mr. Benjamin Richardson, of the Wordsley Glass Works, an eminent manufacturer known as "the father of the Stourbridge glass trade." An account of this gentleman's interesting career appeared in THE POTTERY GAZETTE for May, 1911.

Mr. W. H. Richardson was educated principally at Worcester, and at the close of his scholastic career proceeded to London, entering the business house, in Lamb's Conduit-street, of his uncle, the father of Mr. W. P. Richardson, of Wordsley. Here he acquired in a large measure the sound business training which played so important a part in his after life. He did not devote himself exclusively to the glass trade, but studied metallurgy and other subjects. Soon after attaining his majority he became associated with a tube works at Darlaston, and under the style of W. H. Richardson, Jun., & Co., successfully carried on business as manufacturers of gas tubes, fittings, &c. He also conducted the Wordsley Steam Flour Mills, the firm being known as W. H. Richardson & Co.

In 1853, at the age of 28, Mr. Richardson accepted an invitation to take over the management of the City Glass Works, Glasgow, founded there a short time before by James Couper & Sons. The senior partner in the firm was one of Glasgow's busiest public men, and in time he retired from business, and the glass works were conducted by his two sons and Mr. W. H. Richardson. This partnership continued with little variation until some 13 years ago, when Mr. W. H. Richardson became the sole proprietor.

Mr. Richardson was a gentleman of much inventive faculty and great energy. He invented a process for making steel which was for a long time regarded as the best, and for a time was utilised in Parkhead Forge, Glasgow, and also for a time at the Hyde Iron Works, Kinver. Mr. Richardson was a director of and had considerable investments in important companies. Included among these was the Barking Gas Co., of which he was a director for many years prior to its absorption, with some other gas companies, two years ago, by the London Gaslight & Coke Co. He was a director of David Hulett & Co., London, and of the Huelva Gas & Electric Light Co., Spain, and also held considerable interests in the Glasgow Iron Trades. Other commercial undertakings with which the deceased gentleman was connected were Dobbie, Forbes & Co., of the Larbert Foundry, the Hecla Foundry, and also Shaw, Walker & Co., Glasgow. Mr. Richardson devoted himself almost exclusively to business, and never took any part in public life. He was possessed of much artistic taste, and was a member of the Society of Arts. He paid many visits to his native Wordsley, and never ceased to take keen interest in its institutions. He contributed largely to the founding of the Wordsley Art and Technical Institute, and towards the close of 1907 he purchased the Drill Hall, formerly the headquarters of a company of Volunteers, and presented this to the village. The hall is vested in trustees, and the balance of the proceeds of its lettings, after the payment of maintenance expenses, goes to provide a "W. H. Richardson scholarship" at the Technical Institute. The receipts for the use of the



[*Photo. by Maull & Fox.*

MR. WM. H. RICHARDSON.

Richardson Hall (the title given to the building) are at the disposal of the trustees, who have always tried to carry out the donor's wishes in regard to the scholarship. On the occasion of the formal transference of the hall to the village the event was marked by the presentation of a beautiful illuminated address to Mr. Richardson.

In accordance with his wishes he was buried in the Richardson family vault at Holy Trinity Church, Wordsley. The remains were removed from the house of his nephew in India-street, Glasgow, and taken by rail to the Hawthorns, Wordsley, the residence of his brother, Mr. H. G. Richardson, and from there the funeral took place on May 17. Among the mourners were Messrs. Henry Gething Richardson (brother), Benjamin Richardson, W. H. A. Richardson, H. E. Richardson (nephews), W. A. R. Minnifil, H. A. Minnifil, Miss Richardson, and Misses Minnifil. The Rector (the Rev. Hugh A Hill) conducted the ceremony. A contingent of fifty members of the Wordsley and District Lads' Brigade also attended.

MR. J. A. STOCK, Aged 68.

A PARALYTIC stroke caused the sudden and much-regretted decease, on May 11, of Mr. John A. Stock, of 170, Milkwood-road, Herne Hill, S.E. Mr. Stock had spent a long and honourable life in the pottery trade, and was well known and greatly respected in trade circles. Practically his first start in life was at the Crystal Palace in 1862 with Barnicott & Banfield, who had a china and glass court there. He always spoke of his stay there as being a very pleasant time, and it was while at Norwood that he first met his wife. He made a number of real friends amongst the better class of residents, who used to visit the china and glass department of the Palace (in its palmy days), and with many of whom he kept up a friendship until quite recent years. His stay at the Palace ceased on the death of one of the principals. His next business connection was with Dobson & Sons, St. James'-street, at that time (in the early seventies) one of the best glass houses in the trade. On leaving there in 1879 he went to T. Goode & Co., of South Audley-street, where he stayed some 30 years, and during that long period largely increased his circle of business friends. He was extremely popular, strictly fair in all his business and other dealings, and when he retired from business was greatly missed. His retirement, however, was quite a short one, for, in a few months' time he joined R. Jackson & Co., of 171 and 172, Piccadilly, W., opening a glass and china department for that firm. During the four or five years he was in Piccadilly, until the day of his death, he was actively engaged in building up this new department—securing a rapidly increasing amount of business year by year. Mr. Stock was an enthusiastic Freemason, being one of the founders of the Upper Norwood Lodge, which he served as secretary right to the last. He was, in fact, engaged on masonic work just before his seizure. We are informed that he had been instrumental in collecting for the masonic benefit upwards of £2,000. His kindly disposition found a particular attraction in the charitable aspects of Freemasonry. He also acted for several years as honorary auditor to the Pottery and Glass Trades Benevolent Institution.



[*Photo. by C. F. Treb'e, Brixton-road, S.W.*
MR. J. A. STOCK.

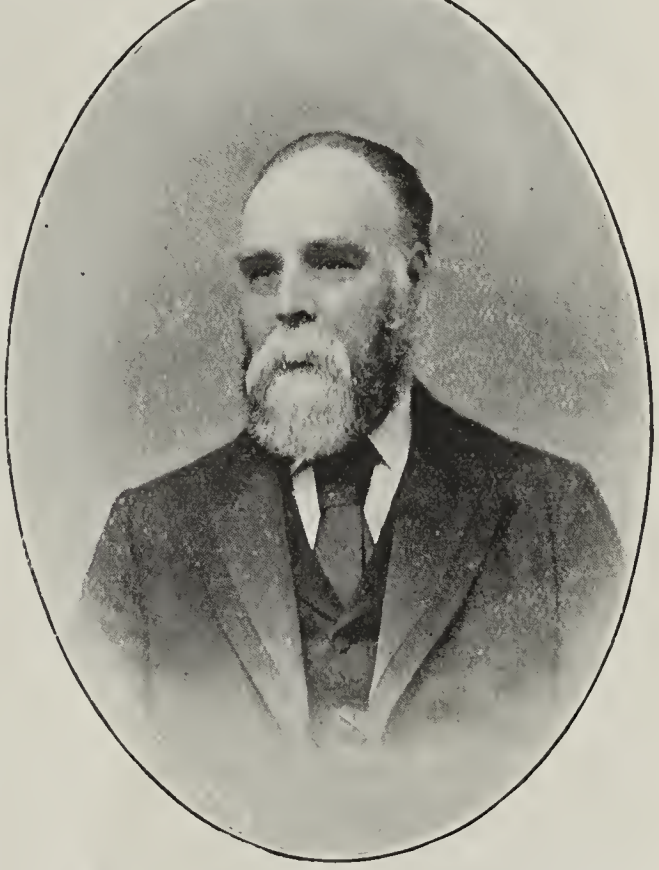
At the funeral at West Norwood Cemetery on May 15, the three sons of the deceased, Mr. J. Stock, Mr. S. Stock, and Mr. C. Stock, were among the chief mourners, and his masonic friends were present in great force. The Pottery and Glass Trades Benevolent Institution was represented by Mr. J. G. W. James (secretary), and the firm of Jackson & Co. by Mr. G. Bowtell, one of the partners.

The late Mr. Stock was a man of most genial nature, and sincere sympathy is expressed by his many trade friends with his family in their loss.

MR. ROBERT EDWARDS, Aged 76.

ANOTHER link with the old City of London china shops was severed when Mr. Robert Edwards passed away on May 11, at his residence at Eastbourne, at the age of 76 years. He was born at Devizes, Wilts., and spent his early business days in the china trade in Devizes, and afterwards at Scarborough, with the late Mr. Chapman.

Fifty-two years ago he joined the firm of Thomas Pearce & Son, 39, Ludgate-hill, E.C., afterwards continued by Mr. Alfred B. Pearce. On the decease of the latter in 1890 the business was purchased by Mr. Edwards and Mr. Jonathan Westley, who had been connected with it for many years. They took into partnership Mr. C. I. Ayres, and in the early part of 1905 Messrs. Edwards and Westley retired in favour of Messrs. C. I. Ayres and C. T. Stanley. The late Mr. Edwards was a perfect master of his business, possessing a wonderful memory, enabling him to remember makers, names of shapes, and the numbers of the various patterns; and his unique knowledge was often placed at the service of the proprietors of this GAZETTE.



[*Photo. by Hollier, Sydenham.*
MR. R. EDWARDS.

During the latter years of his life he suffered with nervous attacks. He took a chill, which proved fatal within a week. The interment took place on May 16. He leaves two sons and a daughter.

MR. WILLIAM BAILEY, Aged 56.

WE regret to chronicle the death on Thursday, May 8, of Mr. William Bailey, senior member of the firm of William Bailey & Sons, earthenware manufacturers, Longton, well-known in the Potteries as a thoroughly practical potter. The deceased, who was ill for only about a fortnight preceding his death, eventually succumbed to Bright's disease.

The late Mr. Bailey was a concrete illustration of a self-made man. Although associated with the potting trade all his life, it was first in the capacity of an oven man at Broadhurst's, Fenton. He was afterwards in the service of John Aynsley & Son, Portland Works, Longton, as a fireman, and from thence he went over to Sampson Bridgwood in the capacity of a partner, remaining with that firm for about twenty years. It was only about a couple of years ago that he left that firm to establish the business now trading under the name of William Bailey & Sons. It is regrettable that he was not permitted to spend a longer career manufacturing on his own account.

Mr. Bailey, although of a genial and sociable spirit, never sought public life, preferring to devote his attention entirely to his business, wherever he might be placed, and he was a hard, diligent, and keen worker. A potter in every sense of the word, so he remained until his death. He leaves a widow and five children, two of his sons being associated with the factory which he established. Mr. Ernest Bailey will succeed his father in the management of the works.

The funeral took place at the deceased's request at Leigh, Staffs., where he had lived for some time prior to removing to Blythe Bridge. We join in condoling with the relatives in their bereavement.

A LECTURE ON STAINED GLASS.

IN a paper on the subject of "Ancient Painted Glass, 1150-1500," read before the Yorkshire Architectural and York Archæological Society, Dr. P. Nelson, M.D., F.S.A., of Liverpool, said that glass in early times was formed by roasting or fritting sand with wood ashes; the mixture was then fused in a furnace, and subsequently blown, forming either cylinders or circles. The sheets of glass so made were again heated and then annealed, that is, allowed to cool slowly. The colour of what were called pot metal glasses, that is, glass coloured throughout its substance, was due to the addition of various mineral oxides to clear white glass. Blue was formed from cobalt, its rich tone in early times being probably due to the presence of arsenic, an impurity in the cobalt ore. Ruby was formed from copper, yellow from iron, brown, such as was used for flesh tints, from manganese and iron, green of an emerald tone from copper, and olive from iron. All the early glass was coloured throughout, the one exception being ruby, a special method of production being necessitated owing to the fact that a piece of glass ruby throughout would have been absolutely impervious to light. In the absence of the diamond for the purpose of glass-cutting the mediæval artist was wont to roughly cut out the work by the application of a red hot wire; the glass cracked along the line of its application, and the pieces so formed were reduced to the desired shape by snipping away the edge, as occasion demanded, by means of the grozing-iron. Upon the various pieces of glass so formed the artist proceeded to indicate his detail, by the application of "enamel brown," a pigment formed of oxide of iron, powdered glass, and some such adhesive substance as Senegal gum. Each individual piece was subsequently fired at a red heat, and the enamel brown was thus fused into the surface of the glass, becoming permanent. In regard to the origin of painted glass, it was doubtless derived from the influence exerted by the enamel workers of the tenth century, who it was recorded came over to Germany by Byzantium, upon the occasion of the marriage of Theophania with the Emperor Otto the Second. Throughout the twelfth and thirteenth centuries the glass at the disposal of the artist was limited entirely to the use of pot metals, and it was not until the opening years of the fourteenth century that any modification of the previous methods was arrived at.

The opening years of the fourteenth century witnessed, however, a remarkable innovation in the glass painters' art. He referred to the introduction of silver-staining white glass, for the purpose of producing yellow tones. This method of treatment was of extreme value, since the glass artist was thereby enabled to do away, to a considerable extent, with the use of leads. So much was this the case that in the fifteenth century, when silver-staining found its greatest employment, the glass painter found considerable difficulty in the adequate disposition of his lead lines. If they regarded glass painting in its briefest terms, they might say that the glass of the twelfth and thirteenth centuries was characterised by the use of the three primary colours almost exclusively, together with the employment of a vast amount of lead work. So much was this the case that as many as sixty pieces of glass may occur in the construction of a square foot of border. The glass, deep and rich in character, was treated in a highly conventional manner, a manner clearly bespeaking its Byzantine origin. The fourteenth century, which coincided with the change from Early English to Decorated Gothic, was characterised by the use of glass of lighter tone and greater transparency, thus admitting increased light into the churches. During the Decorated period they found the secondary colours such as greens and orange largely employed, whilst in the succeeding Perpendicular period tertiary tints came into use, purples, &c., finding a ready employment, whilst white and yellow glass was used in an increasing and highly satisfactory manner.

Silver staining was probably discovered by glass coming in contact with some silver object, such as a penny, whilst in the furnace. The usual method of staining glass yellow was by painting upon the outer surface some silver salt and subsequently firing in the furnace, upon which the glass so painted was stained a lemon yellow, though the tint produced varied according to the quality of the glass and the temperature of the furnace. In the fifteenth century it was discovered that the ruby surface of red glass could be so abraded as to expose the substratum of white. This was of great assistance to the glass painter, as again enabling him to diminish the amount of lead employed in his work, since by means of abrasion and silver stain it was possible to produce upon the same piece of glass red, white and yellow effects, which in the case of rubies produced the most charming jewelled work. Early in the thirteenth century, with a view to admitting a greater amount of light, or perchance from motives of economy, a new type of window found increasing employment, namely, grisaille glass; that was white glass relieved with patches of colour, the painted work consisting of foliate scrolls contained within geometrical panels arranged in a series of succeeding planes.

SOME CHINA SHOPS IN BRISTOL.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

(*Concluded from page* 547.)

MR. W. S. HEK, 74, Castle-street, Bristol.—Calling here, I made the acquaintance of the manager, Mr. F. Curtis, who has been connected with the concern for about fourteen years, and was formerly for twenty-one years with the late business of Seth Thomas, Wine-street, one of the old well-known Bristol china dealers. Mr. Hek's premises have, I understand, always been used as a china shop, being occupied originally by a Mr. Hollins, who, having learned his trade in the Staffordshire Potteries, came down to Bristol to establish a retail business for himself, and having run it successfully for many years, sold it to the present proprietor. The building is a three-story one, the ground floor being used as the selling room. The business boasts of a big wholesale turnover, as well as a fairly extensive family trade, and, of course, being so well placed in an important thoroughfare, also enjoys a good passing trade. Questioning Mr. Curtis as to whether the other china shops in the vicinity gave him severe competition, he replied, "No; we have nothing to complain of in that direction. We are all on the best of terms. It is the bazaar which robs us of a good deal of the business we should otherwise get." A photograph of Mr. Hek's shop is here reproduced.

JONES & CO., LTD., Wine-street, Bristol.—This firm enjoys a really first-class business as drapers and house furnishers, and occupy a block of buildings such as only those engaged in a complete house furnishing business can hope to possess. But it is not their general business with which I have to deal. It is of the china department, unfortunately relegated to the basement, as china departments connected with this class of undertaking often are. The goods are excellently arranged, and there are ample assistants to take charge of inquiries and superintend sales. The stock is of a widely miscellaneous character, and practically everything needed for the household and that can be made in china, earthenware, or glass is to be purchased in the department. Pots and pedestals, vases and art pottery, probably predominate in the ornamentals, and in these Thos. Forester, Longton, and Grimwades, Ltd., Stoke, are well advertised in the goods displayed. Self-coloured flower-pots—made, I noticed, in Longton—are selling in huge quantities just now, and are consequently stocked in all shades of colourings. A good showing is also given to Doulton productions, one special stand being devoted to that firm's china and earthenware. In the tea ware department the Longton firms principally vie with each other for popularity, and a special stand is set apart for English china tea sets, hundreds of patterns being stocked. A quantity of foreign china tea sets is also handled, but on the whole there is rather less foreign ware on show in the department than I had expected to find. There is a fine assortment of dinner patterns from which to choose, representing popular English makers, and a nice assortment of English pressed glass ware gave relief to the whole display. Trinket sets, mostly foreign, of course, are stocked by the hundred, and in all sorts of designs. There are also some very attractive types of ornamental figures, which lend colour to the general effect. A photograph of this department would have been very interesting, but the artificial light of the basement was unfavourable.



FRONT VIEW OF MR. W. S. HEK'S SHOP.

MR. G. W. GRAY, 64, Stapleton-road, Bristol.—This gentleman is the proprietor of two businesses in Bristol, the other one being situated at 134, East-street, Bedminster. The Stapleton-road establishment is the older of the two,

and has been founded some 23 or 24 years. The Bedminster concern is quite a recent undertaking, having only been opened about four or five years. The latter is probably the most important business of its class in Bedminster. Both businesses are concerned entirely with china and glass. Of the two businesses I doubt not that the more recent is just now proving the best investment, for Bedminster has a population of some 80,000 to 90,000, and is the centre of the tobacco industry, for which Bristol is noted. The Amalgamated Tobacco Companies have two huge factories there, and there are also a number of other important factories which all tend to impart a buying capacity to the locality, causing it to become a shopping centre. The Stapleton-road shop is probably not so fortunately placed to-day as it was at the time when it was opened by Mr. Gray, for the suburb is probably of less relative importance than it was 25 years ago. The electric cars tend also to convey the inhabitants definitely from point to point over a long, straight, and somewhat uninteresting stretch of road, and this has probably exerted no beneficial effect upon the medially situated shops. Under the circumstances it is well for Mr. Gray to have another string to his bow. The businesses are both rigid cash trades, and handle no small amount of medium class wares. Neither of them lay claim to a very great amount of casual trade; it is an excellent family trade upon which the proprietor principally relies. It is worth noticing that for a long number of years Mr. Gray's Stapleton-road shop was the only one of its class from Castle-street outwards on the eastern end of the city which was able to maintain a male supervisor, which is certainly something to Mr. Gray's credit. I need not specify the firms with which the proprietor is able to deal, although I made a few very satisfactory notes in this connection, from which I formed the conclusion that he has certainly justified his position as a suburban china dealer. Mr. Gray is the type of man one likes to meet in business. He has a forcible dislike to asking favours, and evidently regulates his purchases to meet his resources, preferring to liquidate his obligations as he goes along. He not only sells on a strict cash basis, but buys on the same lines, and thereby secures whatever advantages are to follow such a course of trading. The window show was of the usual type for such a trade, and powerful incandescent fittings of a modern type help to attract the attention of the passer-by.

J. Eardley & Co., Staple-hill, Bristol.—A three miles' ride by electric car brought me to a point as far in the suburbs as I thought it necessary to go, and at the top of Staple-hill I discovered an unpretentious-looking business which has been running, I understand, for about twelve years, the founder having, up to that time, been identified as a warehouseman with the Staffordshire Potteries, and having acquired in that way an intimate knowledge of his trade. At the back of the premises he has recently built a warehouse some 40 ft. in length to accommodate the stock which the front shop is unable to take, for it appears the business has a rather important wholesale side. As may be expected, Eardley & Co., being situated at a point a fairly long distance from the city, have found it to their advantage to take up also the lamp and hardware trade, and altogether they have a very good trade in the cheaper and medium class goods. Mr. Eardley is to be congratulated upon the shelving and fixturing of his new warehouse, over which I was very pleased to be shown.

Mr. F. W. Stone, 119 and 361, Fishponds-road, Bristol, is the possessor of three businesses in Bristol devoted to china, earthenware, glass and hardware, the other being situated in the Stapleton-road. The china trade is, however, principally dealt with at 119, Fishponds-road, although some quantity is handled at the other two establishments. Mr. Stone recently took over the shop at No. 119 from J. Bastable & Co., Ltd., who founded it. He is assisted in the management of the respective branches by Mr. B. R. Stone, his brother. At Stapleton-road, Mr. Stone has been in business for some 25 years, and at 361, Fishponds-road, for about 12 years. I should conclude that a good turnover is enjoyed, mostly, however, in the cheaper lines.

Mr. Enoch Brownjohn, 64, Castle-street, Bristol, has a good medium class china store in one of the busiest thoroughfares, and has been engaged in the china business on his own account for over thirty years. Previously he had a shop on the opposite side of the road for some 18 years, until, on the expiration of the lease, he occupied his present premises, of which he has had the possession for something like twelve years. He is assisted in the business by his wife and niece, and the handiwork of the latter, to whom a goodly share of the arrangement of the stock is left, is clearly noticeable. The shop is of good size; it is fixtured on orthodox lines, and contains a centre stand, which is laden with as repre-



Mr. Enoch Brownjohn, Bristol.

sentative an assortment of ornamental wares as one could wish to see for a business of its character. The stock has been carefully chosen to suit the kind of trade which the proprietor has found most suited to his needs, and with the exception of a few old stagers in more expensive tea sets, there is little in his stock which is not thoroughly modern, and likely to find its market within a reasonable time. Mr. Brownjohn does not handle a great amount of foreign ware, preferring to deal as far as possible with the English makers, and amongst the Staffordshire makes represented in his stock I noticed the productions of the Blythe Porcelain Co., Thomas Poole, Wild Bros., Rathbone & Co., and Thos. Till. There was a nice assortment of motto ware produced by the Torquay Pottery Co., and also a good showing of South Staffordshire glass ware. So far as the window setting is concerned, I can safely say that every available space was utilised at the time of my visit, and useful as well as ornamental lines were attractively shown. Mr. Brownjohn is a self-made man, and he is to be congratulated on getting a

very nice business together. He is an old Poor Law Guardian, in which capacity his motto was "Efficiency with economy." We show a photograph of the front of Mr. Brownjohn's shop, with the proprietor, looking very much like business, well in evidence.

S. J. KEPPLE, Clare-street, Bristol.—Under this name is carried on one of the oldest-established china businesses existing in the Western Metropolis, it having been in existence for over a hundred years. One thing at any rate is certain: the name of "Kepple" has, for many years, been a household word in Bristol City and neighbourhood. The business has, however, recently been undergoing a process of reconstruction, and some fourteen months ago was placed under the sole control of Mr. Robt. R. Bray, who, up to that time, had had the management of the wholesale hotel glass and china department of the concern at Rupert-street, of which he made a marked success. It was doubtless this fact which impelled Mr. Kepple, when he became desirous of giving up active business, to ask Mr. Bray to take on in addition to the Rupert-street branch the control of the other two departments at Clare-street and Stephen-street, which had previously been worked independently. Mr. Bray accepted the invitation, and took the reins in hand, but for some twelve months continued to work them separately. Since the commencement of the present year, however, the three branches have been amalgamated, and the consolidated business is now understood to be making good headway. As the whole concern is now under one head, Mr. Bray considers that he will be able to maintain a closer personal touch of it, and this is probably the main justification for the scheme of consolidation which has been adopted. One of the first things that forced itself upon my attention was the fact that far more consideration is now being devoted by the business of S. J. Kepple to household wares, the expensive novelty trade to which it clung for a long time having apparently taken a secondary place. The business now boasts of a magnificent stock of a wonderfully miscellaneous character, and I question very much whether it is not one of the best assorted stocks of glass and china in the western counties. The hotel department is undoubtedly an accomplished success. I confess that I had no idea until my recent visit that this business carried such a really extensive stock. I was accorded the privilege of going right through the Rupert-street premises, where Mr. V. C. Bray, son of Mr. Robt. R. Bray, occupies a supervisory position. Perhaps I ought here to mention that Mr. Bray has no less than four sons assisting him in the amalgamated concern, two being attached to Clare-street, and two to Rupert-street. The latter department was the one to which I gave the closest attention, as I was particularly anxious to learn more of their wholesale connection. The building is ideally laid out, and everything appears to be done in the most up-to-date and systematic manner. Some three hundred different patterns in glassware suitable for hotels are stocked. These can be had with any desired badge, and it may surprise some of our readers to learn that the badging is done by a sand-blasting machine on the premises, and this operation I was pleased to be able to witness. Upon a table in a front room on the ground floor these different patterns are sampled, and each sample bears a corresponding number to that allotted to the stock in the fixtures or cases in the warehouse, so that there is no confusion in the event of an urgent sale or a time-conditioned order. Over and beyond these time-saving precautions I was highly interested in noticing that the different pens in the warehouse are all labelled with the exact amount of stock which they ought to contain, and whenever the various pens are drawn from, the tally is corrected to agree with the amount of stock withdrawn. I mention this merely to show the wonderfully systematic way in which transactions are recorded by the present management. This is but one instance of many which I might notice, and I mention this particularly because it will most likely suggest a possibility to a number of other dealers, large and small. One can imagine, of course, that the present condition of things has not been achieved without much labour and forethought, but it is, I am persuaded, a labour which has well repaid itself. In the large warehouses on the upper floors I inspected a stock of hundreds of cases, all clearly docketed with contents, factory from which received, date, &c., and which are ready to be sent out at a moment's notice. From the foregoing it will be seen that S. J. Kepple's business is not limited to Bristol City, nor to its suburbs; as a matter of fact, on the day of my visit, Mr. Bray, senior, was making a business trip to Portsmouth, and he regularly travels the western and southern counties. South Wales is constantly worked by one of the firm's travellers, and I could quite imagine from what I saw in the short time at my disposal that Mr. Bray has taken over the control of a concern with a connection which might well be envied by many, and which cannot but be apparent to the passer-by, whether in Clare-street, Stephen-street, or Rupert-street. Finally, Mr. Bray is not only an expert in matters connected with the china and glass trades; he is, over and beyond, a professional accountant, having served an apprenticeship to the latter profession before associating himself with the glass and china trades. This being so, he, of course, possesses a double advantage, and should be eminently fitted to pioneer to prosperity the amalgamated concerns which he and his four sons have elected to control. I was unable to obtain a good photograph of any of the establishments, or should have been pleased to show it.

HENRY ABRAHAMS & Co., 17, Colston-avenue, Bristol.—This business is particularly concerned with a wholesale trade in hotel badged china and glass, and Mr. Abrahams, who has consistently devoted his energies to this aspect of the trade, has succeeded in working up a connection for his company which has given it an importance throughout the West of England generally. They have preferred to retain an unrestricted freedom in the matter of buying, and consequently have no agency limitations. They are free to buy from all the principal Staffordshire houses, and others. Except for the large window on the ground floor displaying some specimens of high-class china and glass, one would certainly not mistake the business for a retail one. Personally, I formed the conclusion that the window was really a white elephant, and my impression was evidently correct, for I understood later that they have seriously thought of putting the space to better use. The establishment is really a series of warehouses, showrooms, and offices, and a large stock is held on the premises at the disposal of a number of the principal catering firms, as well as some important shipping companies. Mr. Abrahams constantly travels the western and southern counties, and continually brings back with him orders of such a character as keep his place astir. I understand they have quite sufficient to do to attend to their wholesale connection; in fact, Mr. Abrahams was so busy on the morning of my arrival that had I not been able to claim his acquaintance, which had been formed years back in the Potteries, I question whether he would have shown me more than scant courtesy. It is perfectly obvious that they have a very good round of business in the hotel and restaurant line, and that they mean to develop it more and more as time goes on.

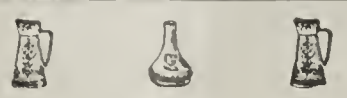
Mr. W. G. GOLDSTONE, 136, Stapleton-road, Bristol, has

been established at these premises only a few years. He possesses also another business at 68, Kingsland-road, Bristol, at which latter place he has been established for about fifteen years, and where he originally opened out in the china and glass line. He has a nice shop and a fair stock of saleable lines, particularly ornamental goods and tea and dinner sets. The Kingsland-road shop since the opening of the Stapelton-road branch is utilised more as a warehouse, and serves the purpose of a stock-room for the new premises.

Mr. G. Howse, 85, Redcliffe-street, Bristol.--This is a typical double-fronted china shop and well fitted out. It has been established some 25 years, and though Redcliffe-street has witnessed many changes during that time, and is now largely composed of warehouses, Mr. Howse still enjoys a splendid window trade and sends goods to all parts of the city and suburbs. The bulk of the trade is retail, but combines a little wholesale. It is interesting to note that in spite of the changes that Redcliffe-street has undergone of late years, and of wet weather, which causes purchasers to either shop in the suburbs or take the tram or 'bus to the centre of the city, a recent Christmas constituted a record trade for the whole of the time Mr. Howse has been in business. He enjoys a good set trade, and still attracts much business by his window display.

J. H. Ball, 679, Fishponds, Bristol.—This business is now being run by the Misses E. & S. A. Ball. It was founded as far back as 1857 by their father, who was responsible for the formation of several departments, including hardware. The latter, however, is now controlled entirely by the ladies' brother. The cheaper classes of goods are handled in some bulk, and all the usual domestic lines are naturally stocked to meet the needs of a somewhat remote neighbourhood. There was a fairly good showing of sets, especially tea and dinner. Ornamental ware was well represented also, but the predominant lines naturally appeared to be useful household articles. Thus concludes my series of notes with regard to the china shops of Bristol. Since the city was previously visited on behalf of The Pottery Gazette, in a similar capacity, a number of firms then noticed have gone out of existence altogether, others having sprung up in their places, and others, again, have removed their quarters, or, may be, passed through the fire. But the trade is by no means played out, and I feel sure that with a fuller measure of co-operation between manufacturers and their bona-fide clients, many of the businesses to which I have paid some little attention in these notes will remain not only stable, but evolve into larger undertakings, and I trust that when I next visit the city, which, I anticipate, will perforce be some years hence, I shall find the firms I have noticed in my present writings "still going strong."

Leadless Glaze China.—A correspondent writes to the "Daily Sketch":—"May I, as an experienced caterer who for the past few years has had a deal to do with leadless china, warn the public how unsatisfactory it still is? We have bought it in large quantities from various makers, but we find the enamel easily wears off, the plate has the appearance of being very dirty, and then it literally falls to pieces. It seems to me that the leadless glaze has no staying power, and either does not harden properly or is soluble to some extent in boiling water. We have had the china made with 5 per cent. of lead in the glaze, and although it lasts longer than the leadless, yet it is far less satisfactory than the ordinary."



SETTLEMENT OF THE JET AND ROCKINGHAM TRADE STRIKE.

OUR Potteries correspondent, writing on May 27, says:—The welcome news was made known this afternoon that a settlement of the strike in the jet and rockingham trade had been effected, the manufacturers having made generous concessions to the operatives.

From early yesterday morning until late at night negotiations proceeded between the Jet and Rockingham Section of the Manufacturers' Association and the officials of the National Union of Male and Female Pottery Workers, concluding with a settlement, subject to the operatives' acceptance. This morning the employees met, and after three hours' consideration, accepted the terms arranged, and agreed to return to work immediately. The terms of settlement, which were signed this afternoon on behalf of the manufacturers and employees, are as follow:—

(1) Throwers.—Price for scorage to be 2s. on all branches, and in addition 2½ per cent. advance on rockingham.

(2) Rockingham.—Jiggerers, turners, and handlers, 5 per cent. advance each.

(3) Jet, Samian and Rockingham.—Cover-makers, spout-makers, women jolliers, and fettlers, 2½ per cent. advance each.

(4) White.—Turners, handlers and jiggerers, 1d. per board advance each.

(5) Thrown coffee-pots and jollied jugs to be referred to the Conciliation Committee under Rule 15 of the late Conciliation Board.

(6) All other notices to be withdrawn.

(7) These terms to be in settlement of all matters in the jet and rockingham trade for a period of two years from March 25, 1913.

These terms comprise concessions additional to those made in the manufacturers' offer of May 22 (detailed in the Notes from the Potteries). Further, I am officially informed that as compared with making prices paid prior to the dispute they represent advances as follow:—Workers included under Paragraph 1, 9½ per cent. advance, and a further 2½ per cent. to rockingham throwers; workers included under Par. 2, 5 per cent.; workers included under Par. 3, 2½ per cent.; workers included under Par. 4, 11½ per cent. It will thus be seen that the advances conceded are considerable, though they do not go to the full extent asked for by the operatives.

The strikes in the cane-and-white sanitary trade and among the marl workers remain unsettled.

Porcelain Table Ware to the weight of 8,659·9 metric tons, the value being £386,850, was exported from Germany during the first three months of the current year. The figures show a marked increase.

A New Pottery in Austria-Hungary.—It is reported that a large industrial company is about to commence operations in Pisek with a capital of 4,800,000 kronen (£200,000). It is proposed to erect a large pottery works and other factories.

Finnish Duties on Glass Pearls.—According to recent Customs decisions, glass pearls of one colour, all of the same shape and size, temporarily threaded on wires or string to facilitate packing, are dutiable on importation into Finland at 29m. 40p. per 100 kilos. Glass pearls arranged according to colour, size and form, as well as pearl collars with clasps, are dutiable at 188m. 20p. per 100 kilos. (1 Finnish mark (100 penni)=9·6d.; 100 kilos.=220·46 lbs.)

THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

(BY ONE OF OUR STAFF.)

(*Continued from page* 542.)

XIV.—JAMES SHOOLBRED & CO.

TOTTENHAM COURT-ROAD, although not in the heart of the City, is undeniably the scene of a good deal of shopping activity, and the fact that several of the largest furnishing concerns have chosen it, and are there congregated within a stone's throw of each other, is without doubt a sufficient indication of its suitability for the transaction of business of this character. Amongst these important houses is the establishment of James Shoolbred & Co., highly reputed both in the City and the provinces, where a good deal of their business is transacted.

As everybody knows, this establishment is a very old one, and is one of the principal complete house furnishing businesses of England, possessing a most up-to-date, carefully selected, and well-laid-out stock of china, earthenware, and glass, which is under the charge of Mr. C. B. Evans.

One of the outstanding characteristics of the room at the time of my visit was an admirable show of high-class glassware, which is mainly of English manufacture, and is run in complete suites of special designs. One end of the showroom is devoted almost entirely to glass, and it is choicely arranged. There are some very fine specimens of Stourbridge and Birmingham makes, and, with the exception of tumblers and everyday lines in loose glass, practically everything is cut. One of the designs which attracted my attention principally was the "Georgian," cut to represent grape leaves and fruit. Choice and simple in effect, it constitutes an elegant pattern, and the water sets in this design look really charming. Another capital pattern is the "Adams festoon," which is run in open stock, and although of a very superior order, the price of it is by no means prohibitive. In heavily cut decanters and wines there are some very beautiful models.

One of the centre tables of the room is very effectively arranged and calls for special mention. It has a large blue earthenware electric lamp, with a drapery shade of similar pattern well chosen to it, which reflects the light upon the cut-glass rose bowls and other specialities immediately below it in a very pleasing way.

In glassware for table ornamentation are to be seen some very smart lines, and it is apparent that the firm prefer to show the better class articles which, although, as I have said, are not out of the way in price, are nevertheless highly artistic and lasting in quality, of such a character that a customer would be hard to please who readily tired of them. The whole of the shaded electric lamps on the respective tables are excellently arranged, and serve the purpose of showing up the wares to marked advantage.

So far as earthenware and china are concerned there is a really magnificent show. Toilet ware has always been a feature of Shoolbred & Co.'s china department, and at the time of my visit fully five or six hundred different designs were on show. This toilet display extends right round two sides of the extensive showroom, and underneath quite a number of the tables. The range includes everything from the cheapest five-piece set to the most expensive. Amongst them a Doulton set of a new tall shape with a floral design took my fancy, and to my mind at any rate stood out prominently. The toilet ware is not, as one might suppose, confined to earthenware; it includes quite a proportion of the very best china. Chintzes in toilet ware are well represented, but mostly in the medium-priced sets. Although the English makes predominate, there is some quantity of French sets, for which, apparently, there is a fair market.

In dinner ware the stock is quite large, and well shown. Everything from plain printed earthenware to rich designs n china is handled. These sets are kept principally in



SECTION OF CHINA DEPARTMENT: JAMES SHOOLBRED & CO. [*Photo. by "The Pottery Gazette."*

100-piece and 61-piece assortments. Sufficient has probably been said to indicate that in dinner ware, as in other things, there is something to suit all tastes.

In tea and dessert sets everything is provided from the most moderately marked service to the most highly priced of Minton, Cauldon, Copeland, Worcester, Doulton, &c. One very long table is reserved for dessert ware, and it supports a very choice assortment of designs.

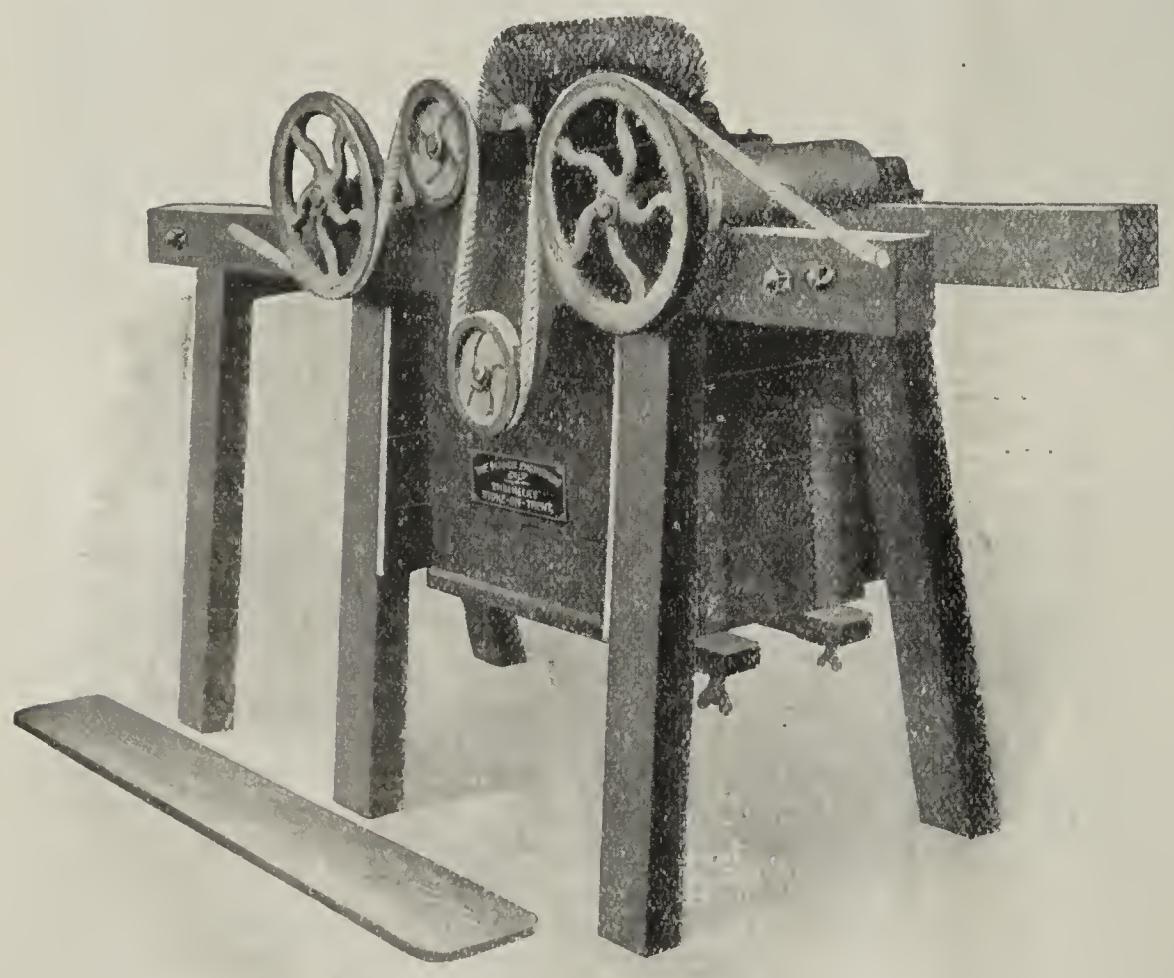
Vases and ornamental wares generally are shown in large variety. An early English pattern of the Crown Staffs. Porcelain Co., reserved, I understand, to Shoolbred & Co., seemed to me to be particularly good value, and a very likely seller. Special tables are set apart for displaying the Dutch ornamentals. In miscellaneous lines they have a magnificent range. There are so many lines that it would be an impossible task to attempt to enumerate them all, and consequently it is, perhaps, better to refrain from singling out any of them. Suffice it to say that there is nothing which the housekeeper may need which is likely to be found absent in Shoolbred & Co.'s display.

Passing along to the end of the room, all the commoner kitchen utensils, in ordinary earthenware, terra cotta, or fireproof, are displayed at prices within the reach of all. Hygienic cooking ware is one of their specialities. One great advantage, to my mind, of Shoolbred & Co.'s china department is that it is self-contained in the one room. My visit, although short, was of quite sufficient duration to persuade me that the department must be counted amongst the progressive concerns of modern London.

MANUFACTURERS' ACCESSORIES.

(BY OUR OWN REPRESENTATIVE.)

THE MANOR ENGINEERING CO., LTD., Manor-street, Fenton, has a history extending back over a hundred years. The business was originally owned by John Shenton & Sons, and was afterwards taken over by Mr. William Hill, upon whose death the present title of the firm was adopted, a name now quite familiar not only in the Staffordshire Potteries, but in many of the different potting centres of the world. They have a well-appointed works which has witnessed many extensions and improvements during recent years, owing to increased demands continually made upon it. A visit which the writer recently made was well rewarded, for it was a real pleasure to walk through the spacious, well-equipped fitting and erecting shop, a roomy well-lighted and altogether comfortable shop, evidently capable of an extensive output. This was originally the site of three small shops, which have of modern years been converted into the present building, and in consequence of the various alterations and improvements which have taken place within the last five or six years the capacity of the works has, it is understood, been doubled. This large erecting shop is equipped with many labour-saving devices, amongst which should be mentioned an overhead travelling crane. The moulding shop has also seen a number of extensions, and even now it is said to be taxed to its utmost capacity all along the line. The company was originally mainly concerned with the production of mining machinery, but the advent of machinery of different kinds for the use of potters was foreseen and provided for, and it is this provision which has given the company its increased business. That they have laid themselves out specially to meet the demand is apparent, for amongst their chief customers may now be found some of the largest and most up-to-date potting concerns in the district. The firm supplies every kind of potters' machinery that may be required, and it is interesting to remember that they were the pioneers of the oval dish-making machine, which is now being employed extensively in the various factories, over two hundred of these machines now being in use in all parts of the world. Although a good portion of the Manor Engineering Co.'s business is located in the Potteries, this would not by any means be sufficient to keep them fully employed, and at the time of the writer's visit there were machines undergoing finishing treatment which were about to be shipped to Sweden, China and America. I was interested to learn how very much more readily the local potteries are now taking to the installation of machinery. This, I understand, has been specially noticeable of late, and potters who previously were very much averse to the employment of machinery are, I was told, now falling into line in a remarkable way. The Manor Engineering Co., Ltd., although supplying, as we have said, all classes of potters' machinery, have naturally specialities, and these are mostly in relation to sliphouse plants and grinding pans with either solid or perforated bottoms as required. A special fitting and turning shop has been established on the works for dealing entirely with potters' machinery, and the casting shop, which is well laid out, finds a great portion of its work to lie in this direction. Amongst the appliances which the writer saw in course of construction were a new patent iron press, a new stilt-making press, a dish machine and an air pump, whilst a thrower's wheel, a tile press, and a number of other appliances were witnessed in different stages of overhaul. I should say that the foundry is equipped with every appliance for expeditiously producing the various types of potters' machinery. Plant for brick and marl works is also provided, and into the details of this class of mechanism quite a number



BOARD-WASHING MACHINE: THE MANOR ENGINEERING CO., LTD.

of noteworthy improvements have been introduced. The latest structural alteration has been in the erection of a new suite of offices following the lines of the workshops in regard to loftiness and airiness, the original offices having become too small and out of date. I must not forget to mention a special appliance which the firm has just introduced in the form of an improved brush board-washing machine, brought out in order to enable the manufacturers to comply with the regulations recently adopted by the Home Office. An illustration of this is here shown. The framework is of wood, having a well of metal in the centre. The machine is fitted with two brushes, one working in the water and the other immediately above it. The board to be washed is passed in at one end of the machine, the motive power being supplied by belt or rope drive, between the two brushes, passing out at the other side of the machine completely washed. It is not only claimed to be a labour-saving machine, but more efficient than hand washing, at the same time resulting in less wear and tear on the boards. The machine in question is already on the market, and as a matter of fact is already installed in some of the most up-to-date of the local factories. I would like to mention also a modern grog pan and pug mill which was in course of erection, and contained many advantages which appealed to the potter. The firm are well equipped with up-to-date plant, and are well suited to carry out all the requirements as regards modern machinery of earthenware and china manufacturers in all parts of the country.

The Dressler Tunnel Ovens, Ltd., 27, Lots-road, Chelsea, S.W., inform us that they have made a further step in the demonstration of the efficiency of the Dressler Tunnel Oven now in use for firing glazed and enamelled tiles. Doubts have been expressed in some quarters as to what delays and cost of repairs would be necessary when, for some reason or other, the oven had to be stopped after a long continuous run. The oven they erected for J. H. Barratt & Co., Ltd., in Stoke-on-Trent, had to be stopped on May 2, owing to a mechanical defect. It was found that the arches were perfectly sound and, generally speaking, the combustion chamber was also sound throughout. As, however, the oven had been running continuously for nine months, it was thought desirable to renew 11 ft. run of each side of the combustion chamber, near the gas burner. This work was promptly carried out, and the oven re-started. The stop has meant a very inconsiderable item of repair, and goods were actually being put through on a commercial scale only 12 days after it was found necessary to stop the oven for examination and repair.

Glass and Pottery in Scutari.—Now that so much attention has recently been called to this place, due to the Montenegrin occupation and its consequences, doubtless our readers will be interested to read how the branches of trade that appeal to us progress there. Window-glass is supplied almost exclusively by Austria, and Italian trade has quite disappeared in this connection. Ordinary glassware comes from Austria, Hungary, Italy, and Turkey. The consumption of better-class English goods, and Belgian lines of superior quality, is only small, due partly to prices and partly to transport difficulties, as the numerous transhipments cause a considerable percentage of breakage. Bottles are exclusively Austrian. The imports of china and crockeryware have declined by one-half, owing to the increasing consumption of enamelled domestic utensils Only the cheapest goods, for use by the poorer middle classes, are now imported.



Novelties.

J. H. Awmack, Ltd., of 8 & 10, New Briggate, Leeds, have published a neat booklet entitled "The Story of the Willow Pattern Plate." The quaint old Chinese legend is re-told with appropriate pictures, and will doubtless awaken sympathetic interest in many readers. As an appendix are given prices and illustrations of various lines of pottery and glass offered by the firm, who also tender an invitation to visit their showrooms. The association of an advertisement with a popular story like that of the hapless Chang and Li-chi constitutes a novel and clever idea which should have excellent results in attracting business.

Jules Lang & Sons, of 16, Bury-street, St. Mary Axe, E.C., are continually devising new means of advertising the "Jules Jar" for fruit preserving. Some time ago we noticed in these pages their smart little booklet, illus-



"Uncle and Aunty Jules."

trated by Hassell, entitled "Uncle and Aunty Jules' Trip to Town." This worthy couple have been kept well to the front, and are likely o become as famous as "Sunny Jim" and "Vimmy." They are now supplied in the form illustrated, brightly coloured and very suitable for window or counter display. Jules Lang & Son have also had one of the best pictures of the "Trip to Town" booklet reprinted on a card so that it can, by judicious cutting and bending, be shaped into a model of Aunty Jules standing at a table bottling fruit in a "Jules Jar" while "Uncle Jules" looks admiringly on, and the comical dog and cat occupy appropriate positions. Such clever advertising should be a great help to dealers who wish to handle the "Jules Jar."

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are taken from the May issue of the Board of Trade "Labour Gazette":—

THE POTTERY TRADES.—Employment in the pottery trades continued good on the whole, but was affected by a dispute of marl workers in the Potteries. Returns from firms employing 16,543 workpeople in the week ended April 26, showed a decline of 0·5 per cent. in the number of workpeople employed, and of 3·5 per cent. in the amount of wages paid compared with March. The decline in the amount of wages paid was due largely to the fact that the Royal visit was made the occasion of a holiday in the week in question. As compared with April, 1912, there was an increase of 3·2 per cent. in the number employed, and of 3·7 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	2,422	£2,801
Earthenware manufacture ...	10,188	9,290
Other branches (including unspecified)	3,933	3,482
Total	16,543	£15,573

Districts.	Number employed.	Wages paid.
Potteries	11,582	£10,154
Other districts...	4,961	5,419
Total	16,543	£15,573

In the Potteries employment was reported as much the same on the whole as a month ago. It was fairly good both in the china and in the earthenware trades. In the other districts employment was good in the earthenware trades, and fair in the china trades. It was about the same as a month ago in the South Yorkshire district. In Scotland it was good, and better than a month ago. In the South-Western district it was fairly good.

THE GLASS TRADES.—Employment was fairly good on the whole. It was rather better than a month ago, and considerably better than a year ago, when the effects of the coal dispute were still felt. Returns from firms employing 7,920 workpeople in the week ended April 26 showed an increase of 3·2 per cent. in the number employed, but no change in the amount of wages paid, compared with a month ago. Compared with a year ago there was an increase of 10·1 per cent. in the number employed, and of 37·7 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,772	£7,740
Flint glassware (not bottles) ...	1,802	2,098
Other branches...	346	406
Total	7,920	£10,244

Districts.	Number employed.	Wages paid.
North of England	745	£973
Yorkshire	4,604	6,179
Lancashire	907	1,077
Worcestershire & Warwickshire	691	883
Scotland	658	812
Other parts of United Kingdom	315	320
Total	7,920	£10.244

At Sunderland and Seaham Harbour employment was fairly good with glass bottle makers. In Yorkshire it was good generally, and better than a month ago. At St. Helens it continued moderate, also at Bristol, and at Portobello good. It was slack at Glasgow, where short time was worked. With sheet glass flatteners at St. Helens employment continued moderate, and with sheet and plate glass workers good. At Birmingham it was fair with flint glass makers, and good with flint glass cutters and plate glass bevellers and silverers. At Wordsley and Stourbridge flint glass makers and cutters continued busy. Employment was fair with pressed glass makers on the Tyne and Wear and with glass blowers in London.

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE annual general meeting of the English Ceramic Society took place at the Hanley Municipal Secondary School, on Saturday evening, May 3, rather earlier in the month than usual, this being occasioned by Whitsuntide falling on the customary date of meeting. It was regrettable that an abnormally wet evening seriously affected the attendance, for it was the last meeting of the session, and the occasion appointed to receive the Presidential address of Mr. C. W. Thomas, who, at a good deal of personal inconvenience, has journeyed month by month from South Staffordshire in order to take the chair, and to discharge the duties of the office to which he was elected twelve months ago.

That the retiring President has fulfilled his obligations in a most creditable manner is agreed on all hands, and probably none can testify to this better than the writer, who has been present at every meeting of the Society during the session, and has had a favourable opportunity of witnessing the diplomatic chairmanship of Mr. Thomas on numerous occasions during his tenure of office.

The subject of Mr. Thomas's Presidential address was wisely chosen, and took the form of

A RETROSPECT AND A PROSPECT.

He said:—It seems to me that an occasion such as this when one is laying down the reins of office, is one when it is the most natural thing to look back over the work of the session and of previous sessions, and also to look forward and try to forecast possible developments for the future. May I take this opportunity of thanking you for the kind way in which you have overlooked my shortcomings as President. I have been very sensible of the honour you have done me in electing me, and I have been more than sorry that I have not been able to do more work for the society during my term of office. It is, however, a little difficult for anyone living at a distance to get to all the meetings. Fortunately, perhaps, the work of the past session has not called for any great statesmanship on the part of the President.

I should like, before saying anything else, to congratulate the Society on being at last within sight of the possession of a permanent anchorage. While the old building has filled a very useful purpose, it has certainly not been adequate to the needs of such a Society as this, and it is a matter for great congratulation that in the splendid buildings which are nearing completion at Stoke, provision has been made for the wants of the Ceramic Society, and I suggest that we are, as a Society, very much indebted to those who have had the control of the building scheme for the provision they have made for us.

If we look back to the beginnings, I am sure we are entitled to feel some pride in the advances we have made. I see that in the session of 1901-2 there were 30 members, and an average attendance of 15 at the meetings. For the session 1912-13 there are nearly 300 members, and I should say that the average attendance at the meetings is nearer 75. This is a significant tribute to the work done and the papers read, especially as the present membership includes a very large number of foreign names, distributed as a matter of fact over most of the ceramic world.

And yet, if we look at the great extent of the ceramic industries, it is evident that so far we have only in this society touched the fringe of the diversified manufactures that are comprised under the general description of clay working. The term "ceramics" is, I fear, interpreted in far too narrow a sense by many people. Under this

heading are comprised not only the making of pottery and earthenware, with all their ramifications, but terra cotta, bricks of all sorts, tiles, pipes, cement, sanitary ware, and last, though I hope not least, refractory wares, which are of themselves a sufficiently varied class. It is safe to say that there is no industrial process of the present day that can be carried on without dependence, directly or indirectly, on some one or other of the products of the worker in clay.

I doubt if even the most imaginative of us, even if equipped with the time machine of our friend Mr. H. G. Wells, could throw our minds back to a period in the history of the human race when the working of clay was unknown. I feel sure that it must have antedated such comparatively recent times as the Bronze Age by whole epochs. Perhaps prehistoric man got his first ideas of the possibilities of clay from the domestic architecture of the swallow or the beaver. Or he may have noticed how the damp, soft clay beside the brook from which he drank formed hollows which retained the water better than the earth near them, and that when dried by the heat of the sun, the clay masses retained their exact shape, becoming once more soft and plastic when wetted again by rain. He would find, too, quite early on, that the smaller animals and birds, covered with a coating of clay and thrust into the ashes of a wood fire, afforded a more than ordinarily tasty meal, and also that the clayey envelope, after being thus heated, lost its power of softening when wetted again, and kept its shape firmly until broken. From this stage to the forming of rude vessels for holding or heating water is not a long step, nor is the glazing of some of these by the ashes of the wood fire likely to have remained long unnoticed.

Certain it is that many ages before the Christian era, the making of clay wares of all sorts had reached a stage of development indicating not only much technical skill, but considerable artistic sense also. Investigations show that bricks were used in Egypt thousands of years before Christ. Some pyramids were made of brick, and some of the glazed bricks and tiles from the old Assyrian temples show glazes as bright and colours as clear as anything at the present time. Bricks have been found in the Nile Valley to which has been assigned a period dating back at least ten thousand years, while, finally, the practically universal diffusion of old ceramic remains in tombs and the débris of ruined cities show that for ages past the clayworker's art has been in general use the world over. I do not know what our secretary would think if he had to produce the half-yearly volumes of our Transactions in the form of fired clay tablets such as those of which some of the early libraries seem to have consisted; probably, enthusiastic as he is about ceramics, he will agree that there are limitations even to the employment of clay.

So much for the antiquity of our work. Looking round to-day, we find that the United Kingdom produced in 1907 (according to the returns of the Census of Production) sixteen million tons, having a value of twenty million pounds, and that 150,000 people were engaged in the making of them.

May I be forgiven here for saying that while the fact that the authorities are awakening to the value of statistics as to the production of these islands is a pleasing proof that they are beginning to search, however dimly, after light, nevertheless, if the figures are to be of real value, they should be grouped with some regard to the differences between the various classes of goods included under clayworkers. I may be biassed, but I think refractory clay wares are of sufficient importance to merit a separate classification, and the same may be said of several other groups of clay wares.

If we consider for a moment the greatness of the field presented by the clayworking industry, with its many branches, we are justified, I think, in looking forward to a not far distant time when the membership of our Society will be not nearly three hundred, but more probably 3,000, and when our meetings will have to be organised by sections, because, while much of the technical side of ceramics is common to all or most of the branches of the industry, nevertheless there are in every department of it special features and special problems that are peculiar to one group only.

I have often thought that the clayworkers of the country, as a whole, have not availed themselves of the benefits offered by this Society to anything like the extent they should. We—and in saying we I am sure I am speaking for all those who have been most actively concerned in the discussions and general work of the Society—are only too anxious that everyone who is interested in the working of clay, in any shape or form, should not only become a member of the English Ceramic Society, but should contribute to its discussions, either by papers to be read or questions to be put before the other members at the monthly meetings. It is only by such means that we can contribute to the general stock of knowledge, and while our individual contributions may not in all cases be extensive, I am quite sure that the sum total of our varied experience would be of extreme value.

Looking back through the Transactions, I notice that the brickmakers, cementmakers, refractory ware makers, and other similar branches, have not been represented in our discussions and our meetings as they should be. I wonder why this is. Is it due to that inherent quality of the clayworker, an overpowering modesty? Or is it due to anything that we, as a Society, have left undone? If it is the latter, I should like to suggest to my successor in the Presidential chair, that, without necessarily "going out into the highways and hedges and compelling them to come in," the Society should try to gather into its fold every kind of ceramic worker. The benefit to the craft as a whole would, I am sure, be very great.

For many ages the clayworker of this country had to find his way more or less blindfold, and there existed no technical literature to which the younger generation could turn for guidance. Nowadays that is greatly changed. All the original work on ceramics is no longer published exclusively in German. There is a large and an increasing output of sound technical research work published in English, and in this connection I think a due meed of praise should be given to our friends in America—the members of the American Ceramic Society—who were the first English-speaking society to discuss and publish ceramic research work. They are a few years our seniors, but we hope we are not far behind them in the value of our work and of our contributions to the general fund of knowledge of practical and theoretical ceramics.

While referring to kindred societies I must mention how very greatly we have been indebted during the past year to those who, in Holland, Germany and Belgium, extended to us such a hearty welcome, and so courteously gave us facilities to see what is being done on the Continent in different branches of ceramic work. Those of us who were privileged to take part in the tour will not readily forget the kindness we received, and the very great interest of all that we saw, and I am sure that as a Society we shall be glad to have an opportunity of returning the compliment when occasion arises.

Speaking of the future, I should like to suggest one or two problems for solution by those who may be at present, or later on, working in the Pottery School. I am quite prepared to be asked, "Why don't you do these things for yourself?" The reasons are really very simple: firstly, lack of time; secondly, lack of scientific training on the

part of most of those who have had any lengthy practical experience.

I think I have said, on a former occasion, something as to the value of a scientific training, which, to my mind, consists chiefly in the fact that it begets in its pupils a scientific attitude of mind. Lay before an ordinary man a set of facts or observations, and he may, or may not, be able to make good use of them, but a scientific mind is one which is accustomed to co-relate and compare every observed fact with some previous standard of knowledge, and is thus able to appraise it at its proper value and give it its proper place in the general scheme of things. For this reason I think research work of any kind is better carried on by a scientifically trained observer, though he will, of course, gain rather than lose if he is in touch with practical work. Now I have noticed, with a good deal of pleasure, that fireclays have been given a certain amount of attention at the Society's meetings. There are, however, some aspects of the problem of using fireclays which are by no means cleared up yet. Among these are :— The behaviour of firebrick under load at high temperature ; the influence of the size and proportion of grog upon ability to withstand variations of temperature without cracking ; the resistance of firebrick to the fluxing action of glass or slag ; the destructive action of furnace and flue gases upon firebrick.

I think most makers of fireclay goods will agree with me that even now our knowledge upon such points as these is but meagre. I venture also to suggest that those who have to use firebrick in various forms would find it advantageous.

There is no doubt that in almost all branches of clayworking, recent years have seen a wonderful increase in the appreciation by practical men of the application of scientific observation. Time was when the scientist was looked upon with more or less suspicion as a theorist who knew nothing of the practical side of things. I am not at all sure that this state of things was not due in part to the scientist himself, who was, perhaps, inclined to despise the mere "rule of thumb" method as being beneath his notice. After all, what is "rule of thumb" but the result of experience ? The only real fault that can be charged fairly to the "rule-of-thumb" man is that his methods of observation were not so precise nor his reasoning powers so highly trained, as those of his scientific friend. Thanks, however, to the development of technical training, this state of things has undergone a great change, and nowadays most works of any standing rely on a trained scientific man to check their methods and test their work.

So far as clayworking is concerned, I think we of the English Ceramic Society may claim to have had our share in bringing about this improvement, the effect of which upon the industry generally will be shown more and more increasingly year by year.

I am convinced of one thing, and that is that the members of this Society have it in their power to advance the ceramic art, and I use the term "ceramic" in its widest sense, in England to an even higher pitch than it has at present attained.

What should be the real aim and object of our work ? It should be something higher than mere material success, though that can never be lost sight of. What I am sure we should all like to do would be to ensure that the work we turn out is the best of which we are capable with the means at our disposal, that into it we have put the best material, aided by the best workmanship we can command, and that those who buy the wares we make will find them sound, durable and, beautiful, according to the knowledge and skill which have gone to the making of them.

The interchange of thonghts and ideas, the discussion of materials and methods, which such a Society as this affords opportunities of, cannot fail to improve the work of all its members, and must, therefore, in the long run, tend to increase the total sum, not only of human knowledge but of human happiness.

I look forward in the future to a much larger membership ; to a much wider range of work and discussion at our meetings ; to other excursions abroad in order to note the methods and processes of other countries ; and, finally, to a recognition by the whole of the clayworking industries of this country of the English Ceramic Society as the focus of all technical and scientific knowledge in the realm of ceramics. I feel certain that in years to come the earlier work of this Society will be recognised as having played a most important part in the development and improvement of the ceramic industry in its various branches.

In conclusion, may I repeat how very much honoured I have felt at having been asked to act as your President during the year that has just expired. I have felt rather diffident at ventilating my own opinions seeing that my sphere of work has been so entirely different to that of most of you, but I have felt an exceedingly great interest all along in the work of the Society, and shall continue to do so, and if there is anything that I can individually do to assist in carrying the work and the welfare of the Society to a further stage, I shall be very happy indeed to do it.

A very hearty round of applause greeted the retiring President as he resumed his seat.

Mr. R. Shenton proposed a vote of thanks to Mr. Thomas for his services during the session. With regard to his address, they would all be ready, he thought, to admit that they might very usefully extend their sphere of operations, and he felt sure that some of the suggestions of Mr. Thomas would bear fruit. They could appreciate the difficulties that their retiring President must have felt in fulfilling the duties of his office. The limited train service from South Staffordshire to the Potteries must have called forth a good deal of sacrifice, seeing that Mr. Thomas had attended a goodly number of meetings. They appreciated the good humour and the sympathy with which he had always presided, and they hoped and believed that the interest he had shown in the Society would not terminate with his Presidency. At the commencement of the session, he (Mr. Shenton) expressed the opinion that in their new President they had a real "jolly good fellow." He did not think that anything had transpired during the session to cause them to alter their opinion in the least. For the pleasing and genial way in which he had presided over their meetings he was entitled to a most cordial and hearty vote of thanks, and this he (the speaker) had the honour to propose.

Mr. Bernard Moore seconded, also expressing admiration for Mr. Thomas' services. He had been struck particularly with one remark in the retiring President's address. and that was with regard to the dependence of the whole of the industries generally on the clayworker. He was sorry that the country did not recognise that more than it did. Other countries were spending enormous sums in research regarding clays, and he thought it was a reproach to a country like this that some money was not devoted to purely research work. There was nowhere that it could be better accomplished than at Stoke-on-Trent, where a very important section of the clay industries of the country were grouped, and he hoped that now that the new college was so near to completion, the governing bodies would recognise this fact. They were not asking favours for their own particular industry, but for

the whole of the industries of the country who were vitally interested in the success of the clayworking industries.

Mr. Thomas, in responding, endorsed what Mr. Moore had said, and cited an instance of indolence on the part of the powers that be in arranging for an endowment in the interests of research work. On a suggestion being made to them some years ago, they replied that the sympathies of the clayworkers themselves should be enlisted by voluntary subscriptions in order that a chair might be established in one or other of the universities. That might be regarded as typical of the way in which suggestions were received by some of our officials. He would be very glad indeed if the matter could be taken up enthusiastically, and if something like a decent grant could be secured for ceramic research. There was certainly an enormous field before those who were prepared to undertake research work, providing they were aided by suitable funds. The government of this country was certainly very much behindhand in displaying interest in this matter, inasmuch as every industry in the country was a loser thereby.

The Secretary's report was presented by Mr. C. D. Grimwade (assistant secretary), and was to the following effect :—

The Committee, in presenting its annual report, would draw attention to the steady influx of new members, which gives reason for much gratification.

They heartily welcome the expression of good feeling which has been extended to us by our American confrères, the American Ceramic Society. The President of our Society each session is now an honorary member of the American Ceramic Society. The Committee propose to reciprocate the good sentiments by making the reigning President of the American Ceramic Society an honorary member of ours.

This seems a fitting time to emphasise the fact that the Society has passed through the first twelve years of its existence without a real home. The Society was started at Tunstall in 1900 by Mr. Jackson, together with a few enthusiastic students. The head-quarters were transferred from Tunstall to the temporary laboratory at Stoke, in 1909, simultaneously with the removal of the head-quarters of the pottery school. Thanks to the Education Committees in the district, every facility has been given to the Society for holding its monthly meetings in the different centres, and now the Education Committee of the Federated Borough is providing a handsome room to be used as library by the Mining Institute and the Ceramic Society, and is also providing a fine lecture hall for such meetings as ours. It is expected that the opening meeting of next session (1913-14) will be held in the new buildings. It therefore seems fitting that the Society should do its best to make a substantial gift to the Council of the new college. We have never aimed at accumulating a large banking account ; the subscriptions barely cover the working expenses, and, consequently, the Committee has appointed Messrs. J. A. Audley and R. H. H. Jones to make an appeal for contributions from the members so that the Society can make a worthy donation to the funds of the new college.

Thanks to a donation of £50 from the Joint Committee, the abstracting of foreign journals seems in a fair way of approaching the ideal which the Committee has had in view for a number of years.

The summer trip to Holland, Germany and Belgium was a great success, and this was largely due to the organising ability of Mr. Heath and to the kindness of our Continental hosts. An account of the trip, for which we are indebted to Mr. Townsend, was published in the last volume of the " Transactions."

We desire to thank the Education Committee of the borough for placing rooms at our disposal during the past session.

We deeply deplore the death of one of our members, Mr. Yates.

The report having been unanimously received,

Mr. A. Leese proposed a vote of thanks to the Hon. Assistant Secretary for his services during the session. He considered that Mr. C. D. Grimwade had proved himself a worthy follower of Mr. A. D. Holdcroft.

Mr. R. H. H. Jones seconded. The labours of the Assistant Secretary were arduous, but he had capably and willingly discharged them.

Dr. Mellor endorsed what had been said by both speakers. No one knew better than himself the work that was being rendered by Mr. Grimwade, jun., who was now an invaluable acquisition to the Society.

Mr. Grimwade, acknowledging, said that when he accepted the post he did not quite know what he was in for, and as a matter of fact he really did not quite know yet. Anyhow, he had learned a good deal during the year, and he would try to do better next.

The Treasurer's report was necessarily incomplete owing to the meeting having been called earlier than is customary. He, however, produced a provisional statement sufficient to prove the solvency of the funds. The complete balance-sheet will be presented at the opening of the forthcoming session.

The election of officers resulted in the appointment of the following :—President, Sir Henry Cunynghame ; Additional Vice-President, Mr. Joseph Burton ; Editor of Transactions and Hon. Secretary, Dr. J. W. Mellor ; Hon. Assist. Secretary, Mr. C. D. Grimwade ; Treasurer, Mr. R. H. H. Jones ; Auditors, Messrs. J. A. Audley and A. Heath ; Librarians, Messrs. F. J. Austin and L. Solon ; Committee, Messrs. G. Adams, J. A. Audley, G. Blair, J. A. Calcott, J. H. Colclough, C. E. Ramsden, L. L. Grimwade, A. Heath, A. D. Holdcroft, A. Leese, A. G. Richardson, F. Turner, F. R. Williams, and S. T. Wilson.

Amongst the short communications were two by Messrs. J. A. Audley and C. E. Ramsden respectively, the former relative to nickel colours, and the latter with regard to zinc and chromium colours, both of these following up the discussion which ensued at the April meeting of the Society,

The meeting then terminated.

U.S. Glass Imports and Exports.—During the nine months ending March, 1913, 292,677 boxes of window glass were imported into the U.S.A., the value being $724,378. The imports during the corresponding period of the previous year were 310,454 boxes, valued at $704,011. The imports of polished plate glass during the nine months ending with March of this year were 862,256 sq. ft. ; cost $219,485. Imports during the corresponding period ending with March, 1912, were 1,187,999 sq. ft., valued at $285,117. The totals for nine months in other branches of the glass industry is as follows, the 1912 figures being given first :—Bottles, &c., plain $663,063, $602,099 ; bottles, &c., ornamented $799,931, $777,584 ; optical instruments, dutiable $425,057, $515,161 ; optical instruments, free $276,657, $380,454 ; all other glass $1,566,724, $1,700,118 ; total, $4,720,560, $4,919,279. The exports during the nine months ending with March, 1913, and the corresponding period of 1912 were as follows :—Bottles, &c. (1913 only), $557,198 ; common window glass $71,346, $309,069 ; plate glass, $33,714, $47,862 ; all other glass $2,374,691, $2,159,632 ; total, $2,479,751, $3,073,761.



A FAMOUS POTTERY EXHIBITION.

(BY OUR OWN REPRESENTATIVE.)

PROBABLY never within the memory of any of us who are living to-day, and very questionably whether ever before our time, has such a beautiful collection of English pottery of such a diversity of design and make been gathered together under a single roof as that which was recently to be seen at the King's Hall, Stoke-on-Trent, for the Stoke-on-Trent, in April, and at Brompton-road, London, early in May.

First of all let us say how much those living in the metropolis and the south of England appreciated the opportunity which was afforded them of inspecting these marvellous evidences of the skill attained by the English potters, and that the exhibition, consisting of some 12,000 pieces of ware, which at its inception was really intended to be purely local in character, could have been removed bodily from Stoke-on-Trent to London within 48 hours,



CASE INCLUDING PRESENTS FROM MANUFACTURERS TO THE KING AND QUEEN, AS SHOWN AT HARRODS' STORES.

inspection of their Majesties King George and Queen Mary on their visit to the Potteries. Exigencies of space precluded our attempting anything like a description of it in our last issue, since when, however, owing to the enterprise of that remarkable house—Harrods' Stores—we have had an opportunity of giving the matter the attention it deserves, and we propose now to attempt to mention, if not all the splendid exhibits which contributed to make it a huge success, at least the majority of those which we had the pleasure of inspecting both at the King's Hall, and without a single breakage, reflects the greatest possible credit upon the officials of Harrods' Stores who undertook the serious responsibility of the task, and they deserve all the credit which may be given them, and all the success which may have attended their enterprising move.

It may in the first place have been overlooked by the organisers that such an exhibition could not fail to have a national as well as a local interest, or perhaps it might be more correct to assume that the constitutional modesty of the Staffordshire potter caused the suggestion for the

removal of the exhibition from Stoke-on-Trent to London to come from another quarter. At any rate the move has been thoroughly justified, and it must have afforded intense satisfaction, not only to the organisers, but also to the manufacturers and to Messrs. Harrods that Her Majesty the Queen was not satisfied with the necessarily hurried inspection of the exhibits on the occasion of Her visit to the Potteries, and that in consequence she graciously attended the resumed exhibition at the Brompton-road Stores, and evinced the deepest possible interest therein, a fact which at once assured the success of the venture.

It is well known, of course, that Her Majesty is an enthusiastic connoisseur, and that she should, along with her daughter, Princess Mary, and Lady Eva Dugdale and Mr. E. W. Wallington, her private secretary, in attendance, have paid a somewhat lengthy visit to the exhibition at Harrods', shows at least that her interest did not subside with the conclusion of her recent tour which embraced the Potteries.

Sir Alfred Newton, Chairman, and Mr. Richard Burbidge, Managing Director, received Her Majesty and conducted the Royal party to the rooms in which the exhibition was made, where Mr. Percy Brooks, the departmental manager, had the honour of showing the distinguished visitors the various stands on which the exhibits were choicely arranged. Her Majesty seemed to be delighted to explain to Princess Mary not only the outstanding features of some of the productions, but the processes of manufacture operating in regard to them, which she had seen under practical conditions whilst in the Potteries.

It would be impossible to over-praise the character of the exhibition, which may be said to have constituted a notably complete representation of the possibilities of the potter's art. The exhibits cannot fail to have uplifted the industry in the minds of all who inspected them, either in Stoke or in London, at the some time deepening the interest taken in high-class British manufactures, and consequently tending to give a decided fillip to the trade.

The exhibition lost none of its charm by being surrounded, as it was at Brompton-road, with articles manufactured in the ordinary course of business; as a matter of fact this would probably enable the visitors to better recognise the artistic merit of many articles not really included in the exhibit, and which were not manufactured specially for it or intended to be shown in conjunction with it. However one looks at the matter, one cannot but admit that the reopening of the exhibition in London was a fine advertisement for the Staffordshire potteries, and we join in the general satisfaction at the good results which the move achieved.

The exhibition at Stoke-on-Trent was naturally highly appreciated by the local public and was well attended, but it would probably be safe to say that it was appreciated to a fuller extent in London, and at the same time it must, of course, be borne in mind that in the city it was attended by a widely different class of the public, whose main idea in attending it was not to offset the ability of one particular manufacturer with that of another, so much as to witness and to appreciate concrete evidences of the superlative skill now associated with English potting generally. Their motive was supplied in the fact that the Queen had visited Staffordshire, and not only so, but had twice inspected the exhibition, and it would, therefore, appear necessary in order to be au courant to make a serious attempt to visit the exhibition oneself. Many came following the Queen's example to buy, but those who did not actually purchase goods from the exhibition in London must surely have been impressed by the intrinsic merit of some one or other of the exhibits in particular, the result of which will be sure to fructify in the days to come, and, of course, to the advantage of Staffordshire where the exhibition was born. Many of these visitors would appreciate doubtless if they have never done so before that the artistic qualities and mechanical perfection of our English pottery still remains unsurpassed in spite of a craze—inexplicable perhaps—for Dresden or Sèvres.

Before attempting to offer a description of any individual exhibit may it be mentioned that the writer does not expect in the following brief epitome to do justice to all or any of the exhibits, for he recognises that even if this were attempted he would fall far short of the ideal. The subsequent descriptions must therefore be indulgently treated by the exhibitors, who, of course, each have an intimate knowledge of all the circumstances contributing to the manufacture of their own specialities. The writer does not expect or wish to pose as an embodiment of the expert knowledge of over sixty of the principal manufacturing firms of the Potteries, and therefore these notes must be regarded more in the light of those of a reporter than as an elaborate descriptive. Any shortcomings must be leniently viewed, and any omissions pardoned. If there be such, they are entirely unintentional; at the same time in reviewing such a comprehensive collection it is just possible that some exhibitor may accidentally be overlooked. Again, the order in which the exhibits are mentioned is simply the result of the order in which the writer made his notes in inspecting the stands, and is not intended in any way to suggest priority, for we should consider it invidious to attempt to adjudge the exhibitors, or shall we say competitors?

Keeling & Co., Ltd., Burslem, had a case showing specimens of their "Losol" ware, the glaze of which, they claim, contains less than 1 per cent. soluble lead, making it entirely innocuous to the workers; at the same time it attains a wonderful brilliancy, which has always been considered to be more or less marked by its absence in leadless glazes. This stand came in for the special notice of Her Majesty, and Princess Mary expressed herself as being charmed with a floral basket, fitted with an inner earthenware lining for the purpose of supporting and facilitating the arrangement of the flowers. This, we understand, was painted by Mr. Shufflebotham. A hand-painted card tray also came in for the special attention of the Royal party, as well as a lovely hand-painted, straight-sided flower vase executed by Mr. Geo. Buttle, the light and shade of this subject being perfect. An octagonal bowl of an old Chelsea chintz pattern was peculiarly charming, and a new pine knob coverdish with a green band and a gold print was very attractive. The lamps used in the decoration of this stand were of earthenware, having hand-painted shades decorated to match, these having been executed by Messrs. Malings, Newcastle-on-Tyne.

Doulton & Co., Ltd., Burslem, had a specially beautiful exhibit, and at Harrods' Stores the Queen recognised at once several pieces which she specially favoured herself. Parenthetically, we may recall the fact that when Her Majesty visited Burslem she expressed a wish to become possessed of a charming little figure known as the "Darling." By the courtesy of Doulton & Co., Ltd., we are permitted to show a reproduction of this, which cannot fail to be of much interest to our readers. Really no one will doubt the Queen's good judgment in the selection of such a piece of art. It was modelled by Mr. Charles Vyse, and is executed in china with a specially new soft glaze. The figure is of a delicate white, the hair only being slightly tinted to represent a typical Anglo-Saxon child. The Doulton case included a very fine rose-painted vase by Edward Kirby, this being an example of enamel painting fired at a very high temperature, the colours being considered absolutely permanent. There were also many articles of chaste and simple decoration, and some wonderful examples of crystalline and Rouge Flambé wares, as well as

some very richly decorated plates. Her Majesty called the attention of Princess Mary to the orchid painted tea service which she had seen at Burslem in the artist's hands.



Doulton & Co.'s Figure, "The Darling," Purchased by H.M. Queen Mary.

Mr. James Kent, Longton, showed specimens of "Ye olde Foley ware," many of which were reproduced from models and engravings found in the house now incorporated in the pottery, from the steps of which John Wesley preached when visiting the neighbourhood. Rustic scenes executed in a soft blue of rare beauty and purity of tone formed a feature of the stand. The Queen said the old flow blue sylvan scenes always appealed to her, and Princess Mary was also keenly interested, standing by some time and admiring the examples shown. Before leaving the stand the Queen made several purchases.

Josiah Wedgwood & Sons, Ltd., Etruria, exhibited some very fine specimens of jasper ware, amongst which a lathe-turned vase in black and white jasper, diced and ornamented with buff stars and surrounded by two groups of classical figures, stood out pre-eminently. There were also included two black basalt lamps, and various fine specimens of reproductions of Chinese and 18th Century designs. More modern styles were not neglected, and amongst these were some very fine hand-paintings with gold print embellishment. The famous Portland vase was specially noticeable on the stand, and some exquisitely painted panels in gilt frames. Beautiful reproductions of the old Powder Blue elicited expressions of admiration from the Queen, in fact purchases were made of it. The old "Ivory Queen's" ware in plaited and ornamental baskets was also much admired, as well as the samples shown of dessert, dinner, and tea ware. Her Majesty expressed the view that the exhibit denoted great taste and afforded a charming variety. It will be remembered that the King and Queen had a particularly nice time at the Etruria factory, and doubtless the stand at Brompton-road pleasantly brought back the visit to her mind.

W. T. Copeland & Sons, Stoke-on-Trent, had a most comprehensive selection of goods on show; indeed, there were several stands, and the Copeland selection might have been considered to be a little museum in itself. The wares shown were really illustrative of the history of the firm since its inception in 1770. The famous Old Blue Print of Spode was a beautiful ensample of what was done at that time, and this was followed up by Spode's underglaze colourings in the late eighteenth century Chintz designs, the stone china with its pleasing greyish tint introduced by Spode about 1790, a blue printed plate of the same design as a service purchased by Queen Charlotte in 1817, and some fine specimens of felspar porcelain, richly painted and gilt, such as were manufactured by Spode until his death in 1830. The remaining pieces shown belonged to the Copeland era, and included examples of egg-shell china richly jewelled by Ball, a landscape painting by Birbeck, a coffee cup and saucer painted by Hurton, and one of the pieces of a service presented to King Edward VII. The "Leisure Hour," a beautiful painting by Samuel Alcock, was exhibited, but was carefully ticketed "Not for Sale." Magnificent service plates ranging up to as much as £27 each were longingly admired by many persons who visited the stand during the time the writer was present. A magnificent vase of green and gold panelling deserves mention, as well as a charming candelabra in white china statuary with a rich gold embellishment, and a Sheraton Tazza treated in rose du Barri with rich hand-paintings in panels. A white china statuette lamp fitted complete with lamp and shade looked extremely fine. One must not forget to mention the "Peplow" and "Chelsea" patterns, of which Harrods' Stores make a speciality. These were prominently displayed, the former being described by Her Majesty as "most beautiful and quaint." The "Old Bow" reproduction also came in for her special commendation. The principal stand of Copeland & Sons occupied a very favoured position right in the centre front of Harrods' showroom, and was admiringly viewed by all, both as they entered and left the room.

Mintons, Ltd., Stoke-on-Trent, presented a display quite worthy of the traditions of such a historic firm. It was a really capital stand. Boullemier and Solon paintings were amongst the principal features. Cups and saucers, as high in price as eight guineas each, sold quite easily from this stand, and the Queen herself made purchases, including two very fine turquoise and gold covered vases of the old Sèvres style. Princess Mary was equally charmed, and eagerly inspected many of the specimens. The Queen considered that Mintons had achieved great things, and her view is, of course, shared all over the world. It is at least interesting to remember just here that Mr. Thomas Minton was the first to engrave an English version of the now well-known Willow pattern. The stand included a lovely show of vases with painted panels, and two candelabras in rose du Barri treatment were extremely beautiful examples of what the firm makes to-day. The exhibit included plain white ware, white with solid gold handle, and white with merely a burnished gold edge. Some splendid specimens were on show treated in turquoise and mazarine, with hand-painted subjects, and they were very much admired.

J. & W. Wade & Co., Burslem, had a case showing some beautiful specimens of present-day ceramic wares, including a panel 6 ft. by 5 ft., reproduced from the painting of Mr. Edmund Dulac, entitled "Circe, the Enchantress." Other panels and plaques were also exhibited, besides examples of tiles decorated in the old Persian and other ancient styles. Many useful and ornamental pieces were also shown. The Queen, who stopped at this stand, expressed herself as being charmed by the colours.

Cauldon, Ltd., Stoke-on-Trent, deserve very special mention in connection with this exhibition. That the Queen was delighted with what she saw on this stand is

best known to those who were present at the same time, and we should be very much surprised if there is not a sequel to it. The exhibit included many specimens of ware supplied to the reigning monarchs of this and other countries. The whole of the pieces shown were of exceptional beauty and merit. Some pieces possessing a special interest were duplicates of a pattern of a breakfast set made for Queen Alexandra, decorated with photographs reproduced from Her Majesty's own negatives. The famous Shakespearean trophy decorated by Boullemier, Sieffert, and other well-known artists, a facsimile of the one made for the Chicago Exhibition, stood out with distinction amongst other pieces. Among a number of fine vases was one decorated with flowers painted by Emile Renard, and another by Bourne, the latter having been shown at the 1851 Exhibition. Specimens were shown of richly-decorated dinner services made for the late Mr. J. Pierpont Morgan and other millionaires. An extremely rich white and gold plate, being one of a service supplied a while ago to Mr. C. M. Schwabe, must be conceded as a fine specimen of modern gilding. The exhibit also included plates with plain crests such as supplied for everyday use in the best families, and even their plain white ware was not left out. The china used at the Durbar was supplied by this house, and Her Majesty was keenly interested in all she saw.

Wm. Adams & Co., Tunstall, were not behind their contemporaries in their exhibit, and they showed specimens in the same style as the original blue printed ware of Wm. Adams, the great grandfather of the present proprietors, who was the first potter, it will be remembered, to attempt copper plate printing in Staffordshire. Numerous specimens of their jasper ware were shown, and a series of their now well-known delicately painted subjects from the works of Charles Dickens. The Queen thought the firm very clever to so faithfully reproduce so many old and quaint pieces.

Gibson & Sons, Ltd., Burslem, showed mostly their jet ware, which, though usually devoted to useful purposes, was shown to be capable of being made the medium of some elaborate ornamentations.

E. Hughes & Co., Fenton, showed, amongst many other things, their "Rosemary" design, which is something quite out of the ordinary run; also their Lowestoft and Louis XVI. decorations, which we have previously noticed in our pages. The old English rose design in tea ware, breakfast ware, and dinner ware was also much admired, as well as another pattern with a grey ground and Chelsea roses. The old Chinese Dragon pattern must not be forgotten, this standing out conspicuously, as it always does, wherever it may be displayed. The Queen remembered the exhibit at Stoke, and thought the designs thoroughly good and up-to-date.

Mr. W. H. Goss had a stand showing a typical selection of his popular productions, and both antique and modern shapes in his famous heraldic china. The display was principally concerned with the crest china, as might have been expected, but other specialities were shown nevertheless.

Booths, Ltd., with their Silicon china, came in for the special attention of Her Majesty whilst at Harrods', and the Old Dutch design, their newest production, referred to in the earlier pages of this issue, was amongst some of the Queen's purchases. She much admired this "quaint and original design." The "Real Old Willow" pattern was also shown.

Collingwood Bros., Ltd., Longton, confined their exhibit practically to domestic china, with which their factory is principally concerned, but it included a rich variety of decorations adapted largely from Old English, French and Oriental designs, executed in many schemes of coloration. Tea, coffee, and dessert ware were principally in evidence, but some capital trinket ware was also included. The Queen commented favourably upon them.

The Star China Co., Longton, by their beautiful and original decorations in "Paragon" dessert and trinket ware, came in for the Queen's compliments. A painted wild rose design tea service, known as the "Queen Alexandra" design, was on show, this being still in use by the Queen Mother. It is interesting to point out that this is a reproduction of a flower used in connection with a charity scheme, a special day for which is set apart during the year, known as Rose Day. A trinket set was purchased from this exhibit by the Queen of a reproduction of an old Sèvres pattern. Some capital vases in solid turquoise and ruby grounds, with raised and chased gold finish, were inspected with pleasure, as also was a magnificent selection of after-dinner coffees. Croquet sets and other novelties contributed to a most successful showing.

S. Fielding & Co., Ltd., Fenton, had a fine show of their "Devon" varieties, both in useful and ornamental wares. Princess Mary was delighted with the Silverine ware, and was surprised to hear that it would not tarnish similarly to the silver of which it is a representation; and hand-painted cattle and bird subjects were shown in vases, rose bowls, jardinières, &c. Altogether there was a very good selection.

Wood & Sons, Ltd., Burslem, were showing a wide range of styles and varieties in their domestic lines, and the Queen described their exhibit as beautiful and artistic, wishing them every success. A series of revivals of the old Chinese enamels was included, wares such as are fired at very high temperatures, dealt with in the legitimate Chinese methods and reproducing the original effects to a nicety, though at the same time being characterised by originality of treatment.

G. L. Ashworth & Bros., Hanley, in their display, had many designs which recalled memories of Miles Mason. Many of the pieces reproduced the shapely forms and Oriental styles of ornamentation of which he was the originator. The old Mason stoneware is everywhere admired, and it was not surprising, therefore, that the Queen was keenly interested in this stand, and especially when she learned that the old Mason methods were still in vogue, both as regards models and decorations. Some fine specimens of lustre and flambé glazes were included, and many of the samples shown bore the stamp of the Mason period.

Birks, Rawlins & Co., Stoke-on-Trent, prominently displayed examples of pâte-sur-pâte. Mr. A. L. Birks, the senior partner of the firm, was for a long time the assistant of Mons. Solon, and has consequently made the best use of an unique training in this direction. Heraldic wares and various artistic types of useful and decorative pieces were shown, and Her Majesty recognised the floral basket which she had presented to her with other pieces from this collection.

Thos. Morris, Ltd., Longton, had a peculiarly artistic display, which occupied a prominent position in the room, very close to the Copeland exhibit. Two plates of a service intended to form a Victorian set, of which every piece is to be different, bore bust portraits of Queen Victoria and the Prince Consort on blue and chocolate grounds, set in elaborate acid gold borders with daintily painted panels containing classical subjects. Table ware in choice patterns was also a feature of the exhibit. Her Majesty had previously displayed peculiar interest in this exhibit at Stoke, and remembered nearly every piece. The richly hand-painted fish and game plates were of distinctive merit, and many Boullemier paintings of rare value were included. This stand must surely have been

something in the nature of a surprise to those who may not previously have been aware of the capabilities of this firm in high-class gold incrustation work.

Hewitt & Leadbeater, of the Willow Pottery, Longton, had an exhibit of topical interest, including specimens of their parian statuary. Busts of King George and Queen Mary, and a small model of Windsor Castle, were typical of some of their productions. Their showing was principally in the crest china specialities on which their business has mainly been established.

Hammersley & Co., Longton, showed many examples of china for the home, though many of them were richly ornamented. The rich gold decorated tea services pleased Her Majesty and Princess Mary immensely. Landscape and fish and game plaques, dessert ware, coffee ware, and tea ware were a mark of the exhibit. Their famous violet decoration, which is now very popular, was, we noticed, also on show.

John Tams, Ltd., Longton, displayed a variety of useful and ornamental pieces, some of them having underglaze mazarine blue of a peculiar richness, embellished with gold. The "Imperi" ware, of Japanese inspiration, was prominent, and was specially noticed by the Queen.

Ridgways, Stoke-on-Trent, showed high-class wares of artistic merit, amongst which were a couple of conventionally modelled figures representing King Edward VII. and Queen Alexandra. Vases and plaques decorated with floral subjects formed a feature of the stand. Her Majesty recalled her visit to the Bedford Works, and conversed with Princess Mary as to some of the details of manufacture which she there witnessed.

Mr. H. J. Colclough, Longton, displayed in his thin china a wide range of table articles, principally in the "Queen's" fluted ware. Other popular shapes, however, with bands in various colours were shown, and also the heavier coloured and gilt designs.

Jackson & Gosling, Longton, displayed examples of their "Grosvenor" china decorated with a conventional floral design of pink roses and green foliage enriched with gold.

Grimwades, Ltd., Stoke-on-Trent, had the largest individual exhibit in the whole display, amongst which was their "Jacobean" ware, decorated in the early seventeenth century tapestry, with a design of conventionally applied autumn vine leaves and fruit with a dark background, executed in warm rich tones. Their "Copenhagen" pattern, produced in the soft greys of the well-known faïence from which it takes its name, was also shown to advantage, particularly in jardinières. The "Royal Hampton" ware, in pink, black, and green, taken from old Queen Anne chintz, stood out well. The "Ecela," in a lustrous colouring, recalled the Renaissance stained glass; the "Seville" had a conventional treatment of oranges on a pearly-grey-blue ground; and the "Royal Dorset" design was formed of massed roses on a jet black ground. The hygienic kitchen ware was not left out. The Queen, who well remembered the exhibit at Stoke, said, in passing, that she considered this a very creditable display, and she graciously purchased a tea service from the stand.

Wedgwood & Co., Ltd., Tunstall, naturally exhibited their popular mazarine blue, which is also referred to more particularly in our present issue. A very good pattern of a black key border on a gold band with green Adams festoon came in for much admiration. A reproduction of the "Intaglio"—a method of engraving precious stones—was very satisfactorily effected, two colours being introduced to get the effect, viz., ultra blue and purple. One of the principal effects was a dark blue mazarine border brought into contrast with a light tracery work, the general impression being charming.

E. Brain & Co., Longton, concerned themselves in their exhibit with domestic wares in their "Foley" china. Simplicity and good taste characterised the display, and the designs shown were thoroughly representative of the firm's everyday productions, being carried out in olive green, with a noticeable disregard for gold. The "Torch" design was particularly admired by the King when at Stoke, whilst the "Rocester" pattern was fancied by Her Majesty. A feature of Brain & Co.'s exhibit was that the wares were shown en suite.

The New Chelsea Porcelain Co., Longton, showed some very good reproductions of Bristol, Plymouth and Lowestoft tea and breakfast services, and many ornamental pieces were represented, and one of the tea services, made expressly for Harrods, was accepted by Her Majesty. Replicas of patterns in the various museums were shown, the originals having been placed at the service of Mr. J. R. Mellor, the company's managing director, by the Curators of the South Kensington and British Museums. The exhibit included a very fine reproduction of the old Powder Blue.

R. H. & S. L. Plant, Longton, had a very nice show of their "Tuscan" china, including a number of most tastefully decorated vases. There were many reproductions of oriental designs, and purchases were made by the Queen from the stand.

Burgess & Leigh, Burslem, were well represented by their examples of reproductions of old English and Chinese patterns adapted to modern requirements without loss of the beauties of the old designs and shapes. Vases with "Chinese Peacock" decoration and the "Delhi" ware, printed from the original copperplate engravings of a hundred years ago, were specially effective, and further purchases by the Queen were here made.

Geo. Jones & Sons, Stoke-on-Trent, had a table arrayed with a capital assortment of "Crescent" china, a choice neat dinner pattern with a gold band and medallions of raised gold spots, enclosing a bunch of roses, being made good use of owing to the pattern being displayed en suite, instead of merely being represented, as is often done, by a single plate. Sample pieces of a dinner service made for King Edward VII. when Prince of Wales, and also samples of a service supplied to the King of Siam at the Coronation, were included, also others made for the same monarch at a later period, together with samples of ware made for the Crown Prince of Siam produced from a water-colour drawing which Her Majesty had seen.

F. Winkle & Co., Ltd., Stoke-on-Trent, showed a variety of vases and domestic wares largely decorated in the oriental styles and characterised by a rich colouration, principally the "Pheasant." A famille rose decoration on a black ground was recognised by the Queen as the same design as a vase which was exhibited amongst the gifts at Stoke. She much admired the old reproductions in toilet ware, and before passing on recognised the dessert ware of Winkle & Co. now in use at Sandringham. Reproductions of Lowestoft, Bristol, and Rouen were amongst the specimens. The Sèvres pattern of this firm in extensive use at Buckingham Palace was a design reproduced by Mr. John Porter (formerly of Worcester), and now the London agent for Winkle & Co.

Alfred Meakin, Ltd., Tunstall, showed pieces of their ware, very simple in character, but nevertheless tastefully designed and carefully executed. Amongst them was a white dinner service. the only ornamentation of which came from the mould in the form of embossment. The exhibit was favourably noticed by Her Majesty, who, it will be remembered, visited the factory at Tunstall.

James Macintyre & Co., Ltd., displayed their electric fittings, door furniture and other articles, in which precision of manufacture is a most important essential. A

number of beautiful pieces of Florian pottery, designed and executed under the personal supervision of Mr. W. Moorcroft, were shown. Pâte sur pâte and other styles, artistically conceived, were shown to advantage, and Her Majesty made certain purchases.

F. & R. Pratt & Co., Ltd., Fenton, showed pieces decorated with scenes from Homer's works, after the Flaxman designs, also a series printed in colours of reproductions of famous works of art, and specimens of terra cotta. The Queen considered their exhibit very good.

Bishop & Stonier, Hanley, showed a number of good representations of their "Bisto" china, and utility was the main idea they had in view in their exhibit, which was thoroughly representative of what the firm is doing to-day, and not merely a representation of a past decade. Their display included tea, breakfast, dessert, dinner and toilet wares, coffee sets on trays, vases, rose bowls, &c. A tea and dessert service in rich blue with a choice gold finish looked really charming. An ivory and mazarine and gold treatment also attracted much attention.

Mr. Sampson Smith, Longton, showed an interesting collection of old Staffordshire figures, animals, and toby jugs, a speciality of the firm for the last sixty years.

Mr. Wm. A. Lowe, Longton, exhibited hand-painted china brooches, decorated rose bowls, tennis trays, fruit baskets and other novelties in "Court" china, and at Harrods' the Queen recognised the china cake basket, to which a silver handle had been added by the Duchess of Sutherland's Cripples' Guild. Other samples of Mr. Lowe's ware came in for Her Majesty's notice, and a special morning tea service was added to the list of her purchases.

Mr. Thos. Poole, Longton, displayed table wares, trinket sets, flower holders, fern pots and stands, &c., in leadless glaze, all tastefully executed.

Redfern & Drakeford, Ltd., Normacot, showed their "Balmoral" china, principally in domestic ware, the most effective of which was perhaps their Royal blue and gold.

James Wilson & Sons, Fenton, exhibited a wide selection of useful articles in their "Queen's" china, one of the few varieties to which the name "leadless" can be correctly applied. This firm has entirely discarded the use of this constituent mineral for the last six years. Other portions of their display embraced some fine specimens of Rouge Flambé glazes on vases of a very good shape. The firm's effort to produce a glaze entirely dispensing with the use of lead was rewarded by the approval of the King, who, when at Stoke, said he considered the glaze looked perfect, and that it could not be improved. This exhibit was worthy of special attention on account of the fine white colour of the body and its extreme translucence. The writer having heard that Wilson's have been experimenting in the preparation of this ware with some special bone, was led to inquire as to its origin, and learned that it was an entirely new material which had been introduced by Mr. A. Heath, a well-known figure to local ceramists. Consulting this gentleman on the subject I was informed that this new bone contains over 90 per cent. calcium phosphate, and is entirely free from carbon. Having such a high percentage of phosphate the quantity which it is necessary to use in the body is naturally proportionately less, and this fact is borne out by the Wilson exhibit now under notice, which I understand contained considerably less bone than the normal local china body. Local manufacturers will probably await with interest the development of this material.

The Soho Pottery Co., Ltd., Cobridge, made a fine show of domestic wares, and many of their samples were distinctly creditable. Their selection included a range of samples of richly-decorated dinner ware and many productions in under-glaze enamels.

Lingard, Webster & Co., Tunstall, exhibited teapots made wholly from local clay, and their well-known Rockingham with a soft delicate and pleasing glaze.

A. J. Wilkinson, Ltd., Burslem, came in for unusual notice with their "Oriflamme" ware, and the Queen and Princess thought it of particular merit and reasonable in price. This lustrous earthenware, splashed, veined and marbled in a most curious way, the effect of which is entirely at the caprice and whim of the furnace, was everywhere admired—indeed it was the cynosure of all eyes at the exhibition.

The tile firms were well represented, and amongst them were Minton, Hollins & Co., Stoke-on-Trent, whose factory the King and Queen visited when in the Potteries; Adams & Cartlidge, Hanley; Woolliscroft & Sons, Ltd., Hanley; and T. & R. Boote, Ltd., Burslem, who showed a pair of tile panels executed in richly coloured glazes entitled "Summer" and "Winter." It may have interested many of those who visited the exhibition to learn that the manufacture of tiles is also centred in the Potteries, many often not realising this.

The New Hall Pottery Co., Ltd., Hanley; Wiltshaw & Robinson, Stoke; D. Cooper & Co., Hanley; R. Sudlow & Sons, Ltd., Burslem; Alfred Colley & Co., Ltd., Tunstall; the Grindley Hotel Ware Co., Ltd., Tunstall; the Pearl Pottery Co., Ltd., Hanley; Myott, Son & Co., Cobridge, and Biltons, Ltd., Stoke, also contributed to the exhibition.

A final word as to the magnificent case of presents made to their Majesties by the Staffordshire manufacturers. A more charming collection it would be difficult to conceive, and it was natural that this case should come in for general admiration. The Queen and Princess were themselves captivated by it, and stood for quite some time pleasurably inspecting it, the Queen explaining the different items to her daughter, and recalling many incidents connected with the individual gifts. No less than sixty manufacturers contributed to this collection, and the gifts were not entirely of an ornate description, but included strictly utilitarian articles, even to footwarmers, teapots and pudding bowls.

On leaving Harrods' Her Majesty expressed herself highly pleased with the display. It had afforded her extreme pleasure, she said, to be able to re-inspect the exhibits in such pleasant surroundings, and she considered it a great accomplishment on the part of Harrods' to have removed the goods so successfully. It may be mentioned that the total value of the exhibition, apart altogether from the Queen's gifts, was £16,000, so that the undertaking was no small one.

The Pottery and Glass Trades Benevolent Institution, by the kind permission of Harrods' Stores, were allowed to place collection boxes round the room, and as no charge was made for admission, it may be hoped that the Institution, of which the King became patron upon his visit to the Potteries, will benefit largely thereby.

The whole of the exhibits have now been removed from Harrods' to the Liverpool Trades Exhibition, where they will be on show for the remainder of the season.

A Report of the Board of Trade Inquiry into the earnings and hours of labour of workpeople in the United Kingdom in the year 1906 has just been published. It contains statistics concerning the numbers of persons employed and their weekly earnings in porcelain, china and earthenware manufacture, brick, tile, pipe and fireclay ware manufacture, glass bottle manufacture, and other glass industries. Had the figures been more recent they might have been worth quoting. As it is, any of our readers who are interested in such ancient history may consult a copy of the report at the office of this GAZETTE.

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ROMAN POTTERY KILNS IN BRITAIN.

(BY OUR OWN REPORTER.)

ROMAN pottery is plentifully found in all parts of England, and it has long been known that much of it was manufactured in the country or colony as it then was. Hitherto, however, the Roman kilns which have been discovered have been of a somewhat primitive description, or have been in such a ruinous state that no true idea of their construction could be formed. Recently certain important discoveries have been made which throw new light on Romano-British pottery manufacture, and present-day potters will find much to interest them in an account of the operations of their predecessors of nearly 2,000 years ago.

We were favoured with an invitation to attend a meeting of the Honourable Society of Cymmrodorion—which specially interests itself in the Roman occupation of Britain—held on May 23 at 20, Hanover-square, W., when an "Account of the Site and Excavation of the Roman Pottery and Tile Works, with their Kilns, at Holt, Denbighshire," was given by the excavator, T. Arthur Acton, Esq., with a Technical Description of the Kilns by Wm. Burton, Esq., M.A., F.C.S. The Chairman, Professor F. Haverfield, M.A., D.Litt., F.S.A., in introducing the speakers, referred to their discovery as almost if not quite unique, nothing similar having been achieved in any of the countries formerly under Roman occupation.

Mr. T. ARTHUR ACTON, of Wrexham, who is a member of the legal profession, and has conducted the excavations in his spare time, gave an account, modest as far as his own work was concerned, but enthusiastic with regard to its results, of the investigations which had been carried out at Holt, in Denbighshire, on the river Dee, some 12 miles above Chester. The sites of at least two villas had first been unearthed, with remarkably perfect heating, bath, and drainage arrangements executed with very fine tiles and pipes. Close by had been found a regular "pot-bank," with one round and two rectangular pottery-kilns, and three tile kilns, besides traces of others. Fortunately, in dealing with these the expert advice of Mr. Wm. Burton, of Manchester, well known as an authority on pottery manufacture, had been sought, and the operations had been conducted under his supervision, and that of his brother, Mr. Joseph Burton. As a result a very complete study of the structure of the kilns had been made. Associated with the kilns were fragments of almost every kind of Roman pottery found in England, in various stages of manufacture. Nearly all the materials were local clays brought down by glaciers from the Welsh hills on the



FIG. 1.—GENERAL VIEW OF EXCAVATIONS 1911–12, SHOWING THREE ROMAN POTTERY KILNS.

Foreground, a circular kiln; background, two rectangular kilns of large size, with strong sandstone facings and dividing wall.



FIG. 2.—INTERIOR VIEW OF FRONT OF DOUBLE-FLUED SQUARE ROMAN KILN.

Kiln floor 17 ft. 8 in. by 17 ft. 7 in. The flue structure beneath the floor cased with strong walls of sandstone ashlar. 1912–13.

one hand, and the Eskdale or Cumberland district on the other. The red marls or calcareous clays from which the famous Ruabon bricks were made were of carboniferous origin, but had also been introduced by glacial action. Close by, too, was an outcrop of Triassic (Bunter) silicious sandstone, which had proved useful for daubing the inside of the kilns. A number of slides were shown illustrating the excavations at various stages and the various kinds of products, many specimens of which were also on view. The latter comprised some magnificent tiles used in drainage and heating systems, and equally fine roofing tiles bearing the insignia of the 20th Legion, which had its camp at Chester (Deva). There were also a multitude of vases of beautiful classic forms, some huge mortars (one 23 in. diameter), and bowls. The graceful necks of many of the bottles excited much admiration, one still having the stopper intact. Besides pottery, two silver eggspoons had been found, and two cornelian seals, showing that a master potter, even in those old days, could be "a bit of a buck."

Mr. Wm. Burton, who was introduced by the Chairman as the highest living authority on the technique of pottery, then proceeded to give a technical description of the kilns. He said that formerly he had believed that Roman pottery kilns were badly constructed, but the discoveries at Holt showed that the potters of those early days had kilns beautifully planned and executed and capable of firing to perfection. The earliest kiln discovered was rectangular, but this was of faulty construction and had evidently been abandoned, a round kiln being actually erected right in its mouth. Then there were two rectangular kilns about 17 ft. long by 9 ft. wide, and one of a new type which might be called a double-flue kiln. In the case of the round kiln, the substructure, the most important part of any kiln, was almost perfect, every flue being in its correct theoretical position. The walls were built of 12 in. roofing tiles, cemented together with clay, and daubed with a mixture of clay and powdered silicious sandstone to protect the tiles from the fire. This daubing was a feature of all the kilns, and could have been replaced whenever required. The firing mouth was on the ground level (now 13 ft. below the surface). Wood fuel was employed, and the beds of charcoal left after raking out the fires had been found in situ. Models of the kilns were exhibited, and slides shown illustrating a reconstruction of the arrangement of the flues. These comprised a main flue, cross flues, and upcast flues, all arranged so as to leave no "blind spot" on the kiln floor. The floor itself was covered with a "false bottom" of perforated tiles. There was some doubt as to how the kiln was roofed, but most probably a temporary roof of sherds and clay was constructed for each firing. This was illustrated by views of a kiln in use in the Canary Islands at the present day, and another depicted by a mediæval Italian artist. Mr. Burton contrasted the reconstructed kilns with those described by previous investigators in England and on the Continent, and pointed out that some of the latter were practically unworkable. The diameter of the round kiln was 7 ft. 3 in. inside, and probably the height was about the same. The second and third rectangular kilns had seven cross flues each, all built of tiles and clay as described in the case of the round kiln. The vaulting of the arches was obtained by employing wedge-shaped tiles. The double-flue kiln marked a great advance in securing uniform diffusion of the heat. It was almost square, measuring 17 ft. 8 in. by 17 ft. 7 in. inside. The base was surrounded by a massive sandstone wall 7 ft. thick. Otherwise, the materials were the same as those formerly employed. It was remarkable to note that the front cross flue was 2 in. wider than the others (i.e., 7 in. instead of 5 in.), to allow for the greater radiation of heat at this point. This was in accordance with the best theoretical construction, and Mr. Burton emphatically stated that he had never seen a kiln better devised and carried out. Adjacent to the kilns had been found the foundations of a large building with very complete hypocaust heating apparatus beneath the floor. This was probably the site of the drying room and a workshop. The excavations are still being carried on, and it is hoped that further valuable discoveries will be made.

Mr. Joseph Burton commented on the simple and practical manner in which the kilns were constructed, and their close similarity to the most improved modern types. He also remarked that the progress made in construction showed that the works had been occupied for some considerable time.

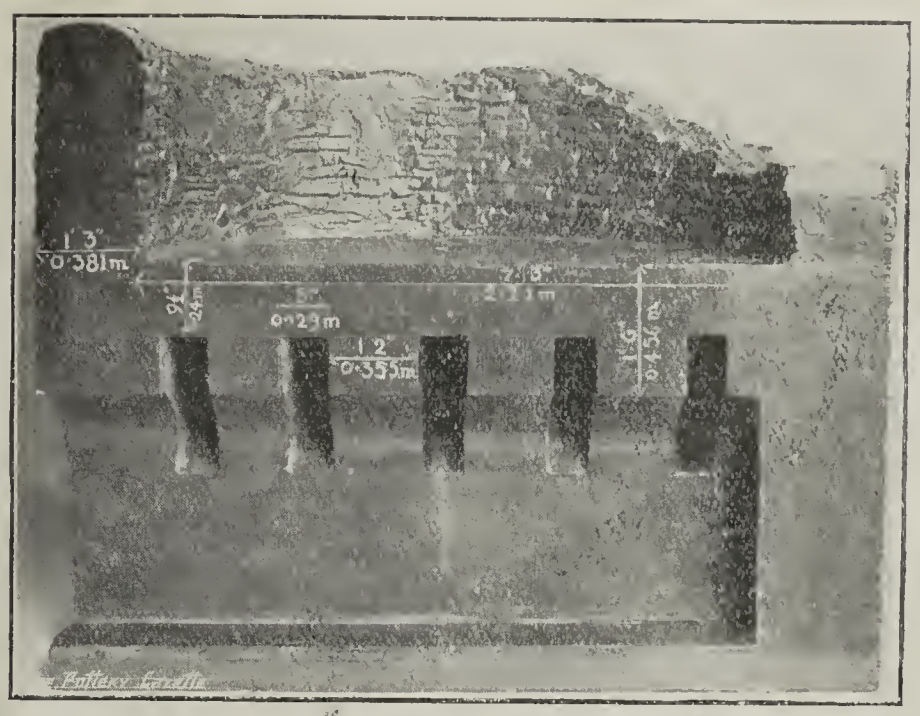


Fig. 3.—Longitudinal and Transverse Sections of Round Roman Kiln at Holt,

As shown in model constructed by Mr. Wm. Burton, illustrating the arrangement of the flues.

The Chairman, in inviting discussion, said that the kilns were probably erected and worked under the supervision of the officers of the 20th Legion for the purpose of supplying the camp at Chester and its auxiliaries.

A brief discussion followed. In answer to some of the questions raised, Mr. Acton said that the bulk of the pottery found was not of later date than the middle of the second century A.D. The only material used which was

not strictly local was the "Cambria" clay from a deposit not far distant, which was still being worked. The finest wares of almost eggshell thinness were made from this clay.

Mr. BURTON agreed with Sir C. H. Read that probably the small barrel-shaped kilns 2 ft. 6 in. to 2 ft. 9 in. in diameter which had been found in other parts of the country were of Romano-British origin. They were badly constructed, would give very uncertain results on firing, and would not last long. All the types of ware illustrated, exhibited, and described by Mr. Acton could have been produced in one or other of the kilns at Holt.

The numerous and distinguished audience, who had followed the lectures with close attention and marked appreciation, accorded hearty votes of thanks to Mr. Acto n, Mr. Burton, and the Chairman. These votes were duly acknowledged, and the proceedings then terminated.

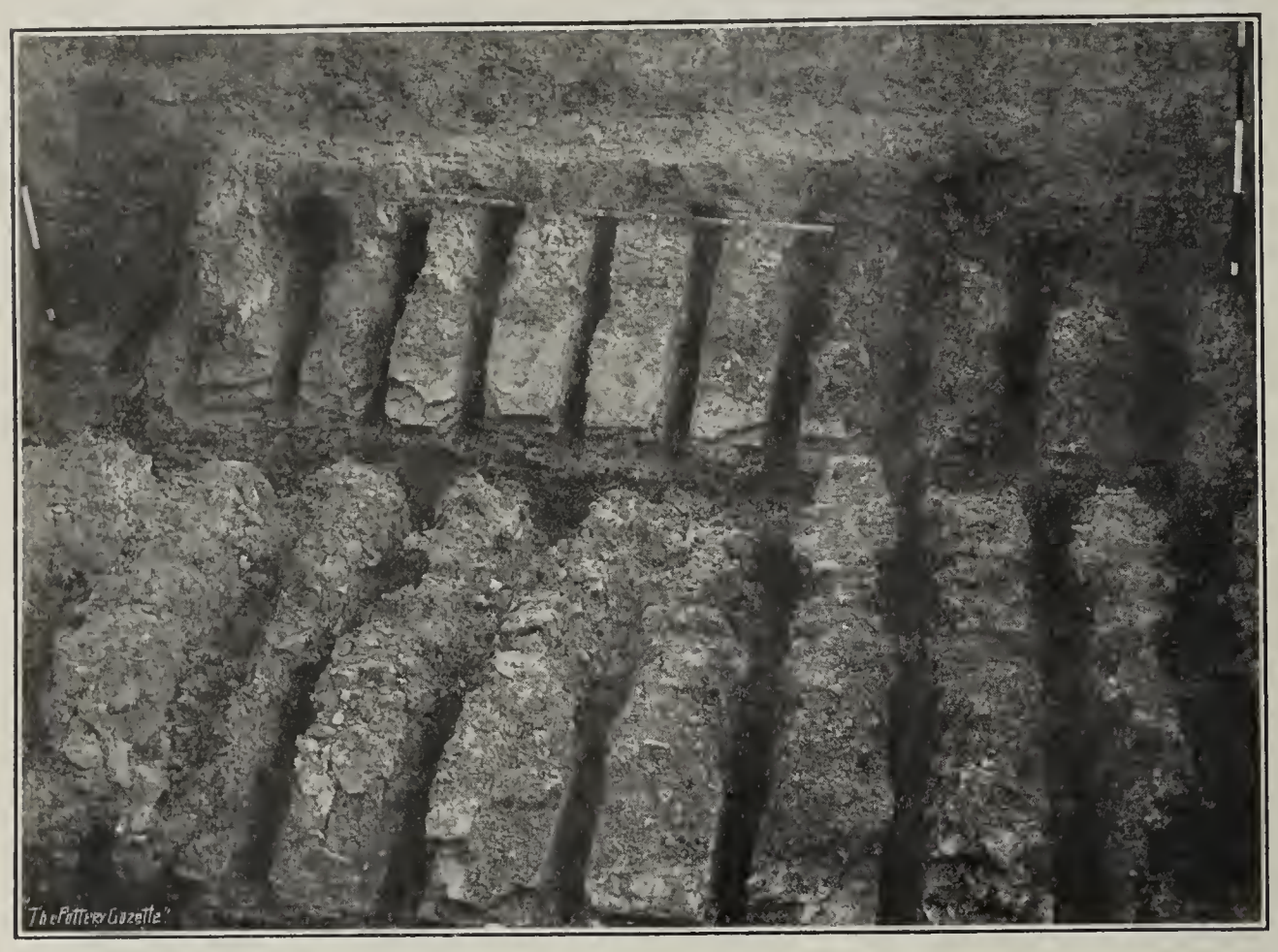


FIG. 4.—THE FINAL EXCAVATION OF THE CROSS FLUES IN SQUARE ROMAN KILN.

At the back a portion of kiln floor is seen in position.

China Ware to the following values was imported into the Bahrein Islands during the year 1911-12 :—India, 28,000 rs. ; Germany, 4,300 rs. ; Belgium, 400 rs. ; Austria-Hungary, 5,200 rs. ; United Kingdom, 200 rs.

German Exports of Table Ware.—During the period between Jan. 1 and Oct. 31, 1912, Germany exported the following quantities of table ware, the corresponding figures for 1911 being given in parentheses :—To United States, 10,633 metric tons (11,862) ; Great Britain, 4,219 (4,141) ; Dutch East Indies, 1,564 (674) ; Australian Commonwealth, 899 (1,487) ; Holland, 1,209 (1,290) ; France, 1,029 (986) ; Belgium, 914 (411). The total exports to all countries amounted to 27,761 metric tons (27,848), value 26,015,000 mk. (25,697,000 mk.).

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

CHARGES FOR STRAW AND PACKING.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—As you are aware, there is a strong feeling running through the retail trade in favour of simplification of the methods of invoicing English china and earthenware.

This feeling was given definite expression by the deputation from the China and Glass Dealers' Association, whose representatives waited on the manufacturers in November last, and who made the concrete proposal that not only should all plusages be included in prices quoted for goods, but also, that in future the cost of straw and packing should also be incorporated in such prices.

It was pointed out that the present system was not only unfair to the dealer, but also that it was obsolete, and placed the manufacturers themselves at a disadvantage with their foreign competitors, with their up-to-date system of invoicing, viz., packing, package and carriage all included in price quoted for goods.

The writer understands that it was generally admitted by the manufacturers that such incorporation would be a distinct advance, and mutually beneficial in the long run. Yet, only six of the most progressive firms have adopted such incorporation —the rest hanging back, because of the initial difficulty incurred in the change. It seems scarcely creditable to British enterprise that the manufacturer, with all the requisite data at his disposal, cannot make the necessary assessment to include such plusages and charges.

The retailer has to do it—on every English package he receives ; and in addition has to contend with varying plusages on similar goods, and varying charges for same sized packages.

How long this is to continue lies with the dealers themselves ! It is evident the manufacturers will not move as a whole in this matter until the united action of the dealers forces them. Unity is the one essential we need—we have lacked combination too long.

Let this unity be effected by every retailer joining the China and Glass Dealers' Association. With a strong national membership endorsing the action of the executive not only would this vexed question be quickly settled, but many other difficulties under which the dealer labours definitely removed.

Yours, &c.,

May 24. "LIVE DEALER."

INCORPORATION OF PLUSAGES.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—If any vital argument were needed on the above question, could a more glaring example be found than in an invoice which we have received during the current month, and "copy" of which we append below :—

Bought of .....

	£	s.	d.	£	s.	d.
7 doz. Pressed Bowls 4s (2/8), 6s (3/-), 9s (3/-), 12s (3/4)	1	1	4			
Discount 2½% ...	0	0	6	1	0	10
2 doz. Rockingham Teapots ... ... 24s (2/3), 30s (2/3), Wedgwood 36s (1/3), 42s (1/3) (9/6, 10/-, 10/6, 11/-)						
1½ doz. Globe Teapots ... 12s (1/3), 18s (1/2), 24s (2/3) (10/-)	0	15	0			
	1	15	2			
Discount 2½% ...	0	0	11	1	14	3
2½ doz. Stone Regd. Bakers, 8" (1/2), 9" (1/2), 10" (1/6) (2/2, 2/6, 3/3)				0	6	3
8⅓% MARKET ADVANCE on— £1 0 10	0	1	9			
12½% MARKET ADVANCE on— 0 6 3	0	0	9	0	2	6
Crate and Straw 12s. 0 11 0				0	11	0
Carr. to.....c. 5 q. 3 at 1 5 0 net				0	7	4
				£4	2	2

Could anything more complicated be conceived? Is it possible to make it more difficult for the retailer to ascertain the actual cost of his goods?

We shall have to add chartered accountancy to our qualifications if this continues.—Yours, &c.,

May 24. STOCKTON.

RAILWAY CHARGES AND THE GLASS AND CHINA TRADE.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I wonder what your correspondent, "A Lancastrian Glass and China Dealer," whose letter on this subject you published in your last issue, will think when he has received the whole of the instructions from the combined railway companies as to the forwarding and storage of his goods.

Probably he has received them ere this, and I hope that he, along with hundreds in our trade, will protest against charges and restrictions which are partly iniquitous and partly farcical. I am not speaking now of the new freight charges which come into operation in July, and have the sanction of Parliament, but of those charges which the Railway Combine has put on storage, so called—second handling and expenses for labelling.

I anticipate the July advance on freighting to be about 4 per cent., which is reasonable, but before this has come into effect the genius who has engineered this "coup" as regards storage, &c., charges (he is probably an American), has given the Combine another 4 per cent. and more, and I very much question if it is not a case of "ultra vires" and that if they were resolutely opposed such charges would not be recoverable by the railway companies.

Let me state what I consider the iniquitous clauses, which contain provisions like this.

LOCALLY.—Goods formerly held for 14 days are now subject to charges if not removed in 48 hours of 4d. per ton per week and 6d. per ton for second handling, minimum 3d.

This to dealers, even in a small way, will mean a worry and extra expense, and to dealers in a large way will mean a curtailment of their orders to the makers in the Potteries unless they (the makers) are prepared to send goods along at stated intervals, or hold them in their works practically in bond. It behoves the manufacturers to look to this point.

IN THE POTTERIES.—Another clause states that goods formerly held for 28 days (little enough) are now only held for 7 days, and are afterwards subject to 6d. per ton per week, but no charge for second handling—why, I know not.

Returned empties, casks and crates, seem to catch it worst, for they are charged 2d. per package per week if not cleared in 7 days.

Let me now come to the farcical part of these charges relating to the addressing of goods.

The Combine, from the Pottery headquarters, informs me that each package I send away must be labelled with "Sender's name," "Full mark of crate," and "Full consignee's address." I wonder what would happen if all these provisions were not complied with?

They then charge for attaching labels thus :—One farthing per label, with a minimum of *one penny*.

N.B.—Amount *under* the halfpenny to be dropped and *over* the halfpenny to count as *one penny*. The italics are theirs, not mine. This sounds like a sum, which, to me, works out at 5 for 1d., 6 for 1½d., and 7 for 2d., but if you send one it is a 1d. On the top of this comes another notice that if the Combine attach labels it is ½d. per label with a minimum of 3d. for 1 day's transactions.

Is not this nearly the limit? Suppose the railway companies decided to double or treble all these charges, would there be no appeal? I fancy there would, and I call upon all the members of our honourable trade to resist these impositions as far as it lies in their power Perhaps our Association might help us in the matter.

Motor traction has great possibilities, but of this more anon.—Yours, &c.,

May 16. ANOTHER LANCASTRIAN.

SPECIAL DISPLAYS FOR DEALERS.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—During this week we have had a show of crockery in our window of goods manufactured solely by the firms whose works were to be visited by the King and Queen. Suspended from the ceiling was a Union Jack, and a large card was displayed setting forth the above ; it attracted great attention, and the sales have been distinctly good.

Though we sell foreign china, we push the English manufacture, and often make an all-British display.

We have had several colour windows—blue, with Copeland's, Spode's, Italian was very attractive ; also white windows, green ditto, and all Bretby and glass windows. Some time ago we cleared our window and filled it with glass specimen vases, and advertised a rose show, gave prizes for the best groups of roses, and then placed them in the window.

This was a great attraction, and we sold a lot of vases through it.

Do please hurry the manufacturers up. I have had goods delivered this week which were ordered from here on June 8, 1912, and this from a firm who advertise quick delivery.—Yours, &c.,

G. H. S. S. & Co.
J. G.

336 and 338, West-street, Durban,
April 26, 1913.

MANUFACTURERS' TERMS OF CREDIT.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—The writer has this morning received six statements of account from manufacturers in the Potteries for goods supplied during the past six weeks.

Each one bears a rubber stamp impression or printed notification in one of the following styles :—(1) Terms : Net cash. (2) Terms : 2½ per cent. monthly ; interest charged on overdue accounts. (3) Terms : cash within 30 days from date of invoice. "The above account being overdue a remittance will oblige." (4) Discount 2½ per cent. for cash during month following date of invoice. (5) Discount 2½ per cent. only allowed for cash within one month of invoice date. (6) Terms : 2½ per cent. for monthly payments, after one month accounts strictly net. 5 per cent. will be charged on all accounts over four months old from date of invoice.

One manufacturer gives the following generous advice : "We will kindly thank you to adhere strictly to regular monthly payments, and thus benefit yourself the 2½ per cent. discount allowed."

Of course a manufacturer is entitled to make whatever terms of credit he personally thinks proper, and many a one, owing to his unique position, and similar class of goods to his not being obtainable elsewhere, can compel the dealer's obeisance. The general fairness, however, of the conditions imposed, judged from a retailers' point of view, should, we think, be worth attention.

Ask any traveller when you give him an order "when may delivery be expected," his reply is most likely to be indefinite or at least evasive. If you should particularly mention the goods are very urgently wanted, you will probably be told that special instructions will accompany the order to the works and you may rely upon every attention being given to it, and that same will be executed as expeditiously as possible.

There are occasions when a specified time for delivery is given, even with apparent confidence by the representative, but such can never be treated with absolute reliability, as experience has proved to us that in not one instance out of ten are such promises fulfilled, and a retailer has to submit and be contented to accept the goods just when the manufacturer chooses to supply them. In many cases repeated letters of complaint may have been received from customers and sent on to the manufacturers, yet in face of all the inconvenience caused by the delay, not excepting orders being sometimes cancelled by customers, from the moment that the goods are invoiced the month's credit commences to mature. A short time ago, having reason to complain of apparent delay in transit, I had proof furnished me by the railway company that the package had actually not been handed to them until five days after date of invoice, which bore that of the 31st ultimo. The reason for this can readily be understood, the terms being 2½ per cent. discount, month following date of invoice. If manufacturers had a little more thought for and some little sympathy with the retailer in his many troubles, anxieties, and difficulties to oblige customers, it would be mutually advantageous ; under prevailing conditions, however, all the burden has to be borne on the retailer's shoulders.

Should one when placing orders bear in mind the limited terms of credit allowed, and consequently order in smaller quantities, and as far as in one's power ensure a fair proportion of the goods being disposed of when the account becomes due, packages, packing charges, and carriage will be found quite out of proportion, and these items alone add quite 12½ per cent. to the cost of the goods. If one should choose to disregard such an apparently wise precaution and order more largely than his immediate needs require, he will be found burdened with excessive and undisposed of stock, to be paid for at the month end or lose his discount.

In one department of our business outside the glass, china and earthenware we can obtain from £1 up to £20 worth of goods with equal advantages, and consequently we order just according to our requirements, whether less or more. It is a pleasure to pay for these goods monthly. No charge is made for packing either small or large lots, full allowance is made for packages when returned, and stock can be replenished to a nicety, fresh supplies being obtainable in from three to seven days, without the slightest fear of any disappointment.

The recently attempted imposition of monthly terms of payment instead of settlements being made quarterly or on journey as formerly, owes its origin, we surmise, to the large limited company concerns, stores, and multiple establishments that can afford to pay monthly, and order largely, having an abundance of shareholders' money to work on, or in such an enviable position as to be able to demand cash from their customers, even before the goods leave their premises.

It scarcely seems fair, however, that the smaller and less powerful, yet no less honest or deserving retailer should be penalised on account of the position and resources of his more wealthy and modern competitor. Those manufacturers who persist in trying to enforce every retail dealer to fall in line, will find the time certainly come when many bonâ-fide glass and china dealers will be ousted, and the big concerns only found left to handle their goods, or manufacturers less tight be given preference to.

Manufacturers as a whole should bear in mind that these big concerns in London and the provinces do not solely keep their works going, they will always have to look to and have regard for the hundreds of smaller distributors of their wares in each city, town, and village of the country. Dealers are daily having to cope with all kinds of opposition unknown to the trade a few years back, and to make many sacrifices under present trade conditions formerly unknown, all which tend to increase the strain of meeting accounts promptly, not monthly but even quarterly.

Several dealers I know, who have been accustomed to make quite elaborate displays at considerable personal expense of certain manufacturers' goods, are now giving to them far less prominence in their windows and show rooms, and ceasing to allow themselves to be made use of as window dummies, entirely owing to these manufacturers dictating such exacting terms of payment and not giving a reasonable time to elapse between, before the account is asked for.

Many manufacturers appear to overlook the fact that they should feel greatly indebted to the ordinary bonâ-fide glass and china dealer for the popularity of their productions, which the retailer has had to pay for in the way of heavy rent, rates, taxes and wages, and is justly entitled to at least some little co-operation and assistance from the manufacturer in gaining this end, but some manufacturers have the presumption to think it should be considered an honour to be allowed such privileges.

Just fancy a retailer having to continually hold a representative stock, probably from 50 different firms totalling hundreds of pounds' value, ready waiting expectant customers' selection, and the manufacturer does not hold stock for immediate delivery of a complete service of even his latest up-to-date pattern and a dealer has to wait weeks, even months, after an order is given.

This is one of the reasons why a china and glass dealer is compelled to overstock and order more goods than he would do, or necessarily need do, if a manufacturer could supply demands more quickly. Yet in face of this he is asked to adhere strictly to monthly payments or be penalised, as though he had disposed of every farthingsworth of goods "invoiced" four weeks previously, received cash for them, and been able to invest the money in "Marconis"!

The glass and china dealer is deserving of far longer credit than many other traders could reasonably look for or expect, owing to the many difficulties that on all sides beset him. We will mention one or two. About three months ago we sold a 70-piece dinner set, and the customer wished us to obtain two additional vegetable dishes and covers to make it more complete. The price of the service was £6 10s. We could not reasonably ask for payment from the customer until these were supplied, yet it took seven weeks to obtain these two extra articles, and a cover then arrived so badly fire-cracked as to be unfit to send out, and had to be re-ordered.

Many instances of this kind we might mention, constant in occurrence, such as breakages in transit, and defects found in pieces of ware causing sets to be rendered unsalcable for quite long periods. Yet no consideration is extended for circumstances such as these; the manufacturer whose terms are monthly is totally blind, dumb, and deaf to everything excepting the dates and amount of statement rendered, and the cash in payment.

Another matter before concluding I must take the opportunity of mentioning, and it is the growing tendency of manufacturers supplying the public direct without the intervention of the retailer, providing the order is of some little importance.

Years ago such business was undreamt of, and all such inquirers were referred to the nearest local dealer or agent for the manufacturer. Now our railway refreshment rooms, local institutions, barracks, restaurants, hotels, cafés, and even church schools are supplied direct by the manufacturer, as though solely engaged in that class of trade. One manufacturer's representative, after visiting all the restaurants in our town and taking every order available on his periodical journeys, always calls upon us to see if anything is required. This is certainly wanting the bun and the halfpenny.

Yesterday we had a customer who wished us to procure for her a sauce middle and a vegetable dish bottom; she did not bring a piece as pattern, but quoted the pattern number, name of shape, and full address of manufacturer. We were told she knew the goods would be in stock at the works as it was a stock pattern, and would we kindly write at once and have the goods despatched immediately, as she had friends staying with her at the week-end, and must have the articles for use then. She ventured the remark that she had been supplied some months previously with the service direct by the manufacturer named, after having seen the pattern referred to in the ladies' column of some periodical. On writing to the manufacturer for the matchings now required she had been informed they could not supply small orders such as that, excepting through the retail trade, so she had to come to us.

What generosity and thought for the trade! Yet this same manufacturer supplied the service and invoiced it direct to an entire stranger, and took the profit the retail dealer was entitled to.

Some manufacturers dwell very much on the extra burdens placed upon them by legislation, and extra cost of materials, but forget to mention that at the first opportunity they recompense themselves by advances at foot of invoice of from 5 per cent. to 15 per cent., which in many cases a dealer can only partially recoup himself for in the selling price of goods. —Yours, &c.

May 23. QUID PRO QUO.

ANSWERS TO CORRESPONDENTS.

O., India.—We have referred to our list of the purchasers of Brownfield's patterns, but cannot find any mention of the Landseer pattern dinner ware, neither does same appear amongst the patterns destroyed. We are inclined to think that the pattern is a very old one, one that had not a very long run, and one probably that was destroyed many years before the works of Brownfield were finally closed. Our best advice to you is to write to some of the oldest manufacturers in the Potteries and inquire if they have some such similar pattern amongst their old copperplate engravings and could reproduce for you.

Inquiries Answered Through the Post for :—Toilet ware, No. 23,730; Water Kettles (described as "teapots with handles over the top"); "Nepaulese" Dinner Ware; Semi-porcelain latex cups for rubber collecting; Toilet Ware, No. 101,373. Marbled ewer, "Eldon" Shape; Teaware, Reg. No. 176,554; "Nansen" teapots; china, Reg. No. 250,255; "Lowestoft" china; Blue Print Teacup "Depose," Reg. No. 137,108.

Parliamentary Notes.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of Corruption.—The text of Sir Albert Spicer's Prevention of Corruption Amendment Bill has been issued. Its object is to allow any prosecution for an offence under the Prevention of Corruption Act, 1906, to be instituted without the necessity of first obtaining the consent of one of the Law Officers of the Crown. The Bill further provides for an offender being committed for trial before a jury, where the Court of Summary Jurisdiction thinks it desirable that he should be so tried and even where the accused has not exercised his option of a trial upon indictment. It also extends the time in which offences may be dealt with summarily from six months to two years.

Lead Poisoning in the Potteries.—In the House of Commons on May 1, Mr. Noel Buxton asked the Home Secretary to give the statistics of lead poisoning in potteries for this year; and whether any good result from the new Regulations could yet be noted? In reply, Mr. McKenna said that the number of cases reported up to date was twenty-six, of which four were fatal; the number for the corresponding period in 1912 was the same; five, however, being fatal. The new Regulations were only made on January 2 last, and entailed a great deal of work, both on the occupiers and the Department, to give effect to the requirements. It was too early yet to look for any substantial change in the figures of lead poisoning. Mr. Wedgwood then asked if these Regulations were then in force in all the potteries in North Staffordshire or only in some? Mr. McKenna: I should like to have notice of that question. I think they are in force everywhere.

Special Rules for Potteries.—In the House of Commons on May 5 Mr. Wedgwood asked the Home Secretary whether the new rules respecting the pottery industry were supposed to be enforced at all the potteries, and, in particular, whether any, and if so, what steps were being taken to see that ovens were not being emptied before the temperature had fallen to the maximum laid down in the rules. Mr. McKenna, replying, said that the Regulations were in force, but they entailed a great deal of work both on the employers and on the Department to give them full effect. The requirements would be enforced in the ordinary way by the inspecting staff, which had been specially strengthened for the purpose of bringing the Regulations into operation, and, as the questioner was aware, special arrangements to secure the observance of the requirements were provided for by the Regulations. Regarding the requirement mentioned in the question, he was informed that no case of excessive temperature had been met with, nor had any complaint on the subject been received.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR APRIL, 1913.

		Quantities.				Value.			
		Month ended April.		Four Months ended April.		Month ended April.		Four Months ended April.	
China or Porcelain, Earthenware and Pottery:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	2,207	3,388	13,768	13,251	£3,191	£6,150	£20,042	£22,499
„ France	„	3,469	4,711	30,945	26,098	4,401	9,145	27,359	36,306
„ United States of America	„	15,835	21,185	86,019	91,403	21,461	30,349	119,000	134,379
„ Brazil	„	23,588	37,314	144,408	132,620	16,412	24,516	74,444	98,089
„ Argentine Republic	„	16,798	54,915	108,020	162,977	18,538	27,285	86,696	109,198
„ British South Africa	„	7,206	15,245	32,970	50,934	7,928	11,066	39,020	49,033
„ British East Indies	„	19,871	44,014	136,654	149,144	13,268	23,978	78,742	91,214
„ Australia	„	16,112	30,734	93,664	105,356	20,890	27,140	110,970	110,841
„ New Zealand	„	4,750	7,211	31,477	29,499	6,649	10,243	43,127	42,570
„ Canada	„	20,308	61,678	102,298	194,219	17,578	46,351	106,148	159,895
„ Other Countries	„	51,636	98,976	326,604	398,537	41,600	69,077	219,605	264,016
Made up as follows:									
Porcelain, Chinaware, and Parian	„	984	1,342	4,864	5,813	8,514	13,406	44,408	58,193
Floor Tiles for Tesselated Pavement	„	4,757	8,083	22,596	26,987	4,792	6,033	24,091	23,625
All other Tiles (except Roofing and Street Paving)	„	8,613	16,556	40,466	60,270	8,246	16,308	39,729	61,835
Sanitary Ware	„	23,031	40,147	106,956	134,513	32,334	49,946	147,741	190,243
Electrical Ware, Door Fittings, and Chemical Ware	„	3,175	3,066	15,491	22,171	2,954	4,110	14,165	18,244
Other Earthenware (including Semi-Porcelain and Majolica)	„	77,696	119,717	437,068	479,700	102,216	159,853	570,945	642,451
Jet, Rock'm, and Glazed Terra-cotta	„	99	157	985	3,453	304	390	1,599	3,221
Red, Stone, Brown and Yellow Ware	„	63,425	190,303	478,401	621,131	12,556	35,254	82,475	120,228
Glass.									
To British South Africa	value £	—	—	—	—	6,832	6,642	33,160	34,743
„ Other Countries	„	—	—	—	—	104,045	155,390	512,338	567,920
Made up as follows:									
Plate Glass	cwts.	15,477	23,034	70,750	94,620	27,185	36,719	119,355	150,259
Flint Glass	„	6,043	6,405	30,999	26,863	20,339	21,810	96,598	97,483
Glass Bottles	gross	64,260	85,474	310,257	313,501	36,277	54,543	187,862	192,381
Glass Manufactures, unenumerated	cwts.	35,660	62,513	195,912	205,111	27,076	48,960	141,683	162,540

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR APRIL, 1913.

Porcelain, Chinaware, and Parian	cwts.	2,319	4,129	11,608	14,250	12,468	25,632	58,588	76,088
Floor Tiles for Tesselated Pavement	„	87	245	247	308	110	210	238	270
All other Tiles (except Roofing and Street Paving)	„	2,381	4,322	9,248	12,451	1,394	2,146	5,783	7,449
Sanitary Ware	„	—	23	256	60	—	112	503	188
Electrical Ware, Door Fittings and Chemical Ware	„	1,819	2,045	9,667	10,662	3,178	3,325	14,860	17,219
Other Earthenware (including Semi-Porcelain and Majolica)	„	27,931	30,263	100,739	104,741	51,327	61,119	196,016	215,334
Jet, Rock'm, and Glazed Terra-cotta	„	6	218	23	503	19	425	89	973
Red, Stone, Brown and Yellow Ware	„	14,437	25,122	99,131	110,987	4,691	3,815	21,096	22,160
Window and German Sheet Glass	„	95,135	114,135	454,874	449,856	55,094	65,122	257,875	250,557
Plate Glass	„	27,556	40,740	116,915	167,117	33,927	48,643	146,988	198,051
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	„	64,820	77,328	270,135	306,187	96,152	106,487	400,733	420,076
Glass Bottles	gross	157,094	170,040	597,536	675,066	68,967	71,015	257,917	279,060
Glass Manufactures, unenumerated	cwts.	1,548	149	6,021	917	1,289	175	5,248	1,914

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR APRIL, 1913.

Porcelain, Chinaware, and Parian	cwts.	186	1,141	2,976	4,367	1,234	5,840	16,349	22,959
Of all Other Sorts	„	2,518	2,091	3,805	5,179	1,739	4,968	4,293	9,327
Window and German Sheet Glass	„	1,562	590	3,770	2,358	905	266	2,100	1,287
Plate Glass	„	112	1,433	1,220	4,228	169	2,394	1,796	5,800
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	„	642	2,177	3,958	4,708	1,894	6,251	11,009	14,728
Glass Bottles	gross	3,547	8,754	14,993	21,546	2,134	5,449	8,282	12,068
Glass Manufactures, unenumerated	cwts.	7	94	861	437	4	81	993	343

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Mar. 27, 1913, to April 26. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to April 26. Packages.	Corresponding Period, 1912. Packages.
Boston	824	429	2,918	2,226
New York	920	574	3,519	2,404
Baltimore	422	357	2,212	2,740
Philadelphia.....	314	358	973	1,193
New Orleans.....	56	76	397	270
Newport News...	—	—	35	45
San Francisco ...	97	122	410	449
Portland, Maine.	253	166	1,216	593
Galveston	49	67	61	214
Portland, Oregon	22	21	91	65
Inland Points ...	27	54	225	196
Total	2,984	2,224	12,057	10,395

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c. ; also marked local newspapers.

Mr. C. E. Snook, glass and china dealer, has been elected a member of the committee of the Sheerness Chamber of Commerce.

The Stock of the late Mr. Thos. Fox, glass and china dealer, Halifax, was disposed of by auction on May 26 and 27 by direction of the exeeutors.

Mr. George Matthey, F.R.S., F.C.S., of Johnson, Matthey, & Co., Ltd., Hatton-garden, E.C., left estate valued at £305,252 gross, with net personalty £301,067.

Projected Pottery Extension.—Chesterfield Town Council on May 14 passed plans for a new round kiln to be erected at the Wheatbridge Pottery for Edward Wright & Co., Ltd.

Mr. Harry Barnett, of 22, Bartlett's-buildings, Holborn-circus, London, E.C., has been appointed London agent for John Tams, Ltd., Crown Pottery, Stafford-street, Longton.

Mrs. Barber took the prize for the best dressed window in the glass and china trade at a window dressing competition held in connection with a shopping week organised at Denton (Cheshire) by the Traders' Association.

Mr. J. W. Walton, of Bath House, 57 and 59, Holborn Viabuct, E.C., informs us that he has given up the agency of Wood & Sons, Burslem, and taken up the agency of C. H. Brannan, Royal Barum Ware, Barnstaple.

Mr. R. P. Copeland, of Kibblestone Hall, Stone, Staffs., of the firm of W. T. Copeland & Sons, china and earthenware manufacturers, Stoke-on-Trent, who died on March 3, aged 72, left estate valued at £113,715 gross, with net personalty £97,270.

Mr. J. T. Potts, glass and china dealer, Wolverhampton, sustained a loss of £30 through a peculiar accident on May 14. A portion of his crockery stall in the Market Hall suddenly collapsed, with the result that china to the value named was broken.

Bottle Works Offered for Sale.—At Sheffield recently the South Yorkshire Glass Bottle Works, Swinton, near Rotherham, were offered for sale by auction, together with the stock-in-trade, stores, plant, &c. The bidding went up to £2,500, at which the property was withdrawn.

The death occurred on May 11 of Mr. Albert Saunders, a member of the firm of M. Saunders & Son, potters, Chalfont St. Peter, Bucks. Deceased, who was only 35 years of age, was the younger son of the late Mr. Albert Saunders, of the Potteries, and died from double pneumonia after a brief illness.

A Special Ceramics Number of the "Cardiff Libraries Review" has been issued containing a special list of books on ceramics, &c., in the Central Lending and Reference Library. The list occupies 8½ closely printed pages, and shows the library to be possessed of a comprehensive collection of works on this subject.

British Clay Exports during the month of April were as follows :—China clay, 78,962 tons (£92,273) ; fire clay, 5,132 tons (£3,922) ; other sorts, 5,126 tons (£4,495). Exports for the corresponding period of last year were :—China clay, 58,087 tons (£63,995) ; fire-clay, 1,775 tons (£1,652) ; other sorts, 5,795 tons (£4,299).

Mrs. Gorman, wife of Mr. John Gorman, of the City China Hall, High-street, Kilkenny, died on May 16. The late Mrs. Gorman was a comparatively young woman, and was ill only for about a week before her death. Great sympathy is felt with her husband, in his sad bereavement. The funeral took place at Foulkstown Cemetery on May 18, when there was a large representative attendanee.

Proposed Essex Glass Works.—At a meeting held at West Mersea (Essex) on May 10, Mr. L. Weaver announced that there was a possibility of a firm, whose directors he was acquainted with, erecting a glass factory in the parish if facilities were offered, and the residents interested themselves in the project. Mr. Weaver undertook to place the scheme before the Parish Council for their consideration and approval.

Presentation.—On the occasion of his marriage on April 28 to Miss Marianne Cissie Colwell, of Ilfracombe, Mr. John Woollacott Brannam, younger son of Mr. C. H. Brannam (C. W. & J. W. Brannam), of the Royal Barum Ware Works, Barnstaple, has been presented by the employees with a silver epergne and silver spoon, the latter having been designed on behalf of the decorators by Mr. F. Braddon, the chief designer at the works.

Mr. W. Howson Taylor, of West Smethwick, has just issued a new catalogue of his Ruskin Pottery. In several cases increased prices are quoted, owing to the rise in cost of materials and other expenses. The catalogue is well arranged, a clever system of classification being applied to the various shapes and colour schemes. Illustrations are plentiful, and two artistic coloured plates are placed at the beginning of the booklet, which is well printed and neatly bound.

Glass Research at the National Physical Laboratory.—The report of the National Physical Laboratory for 1912, which has just been issued, states that in the Optics Section a series of experiments was made to test the absorption by glass of light of short wave-length. The glass ordinarily used in show cases for museum specimens, &c., allows a considerable amount of ultra-violet light to pass through, and this light is largely responsible for the fading of the specimens after prolonged exposure. Hence it would be an advantage to obtain a glass which, while absorbing all deleterious ultra-violet light, would yet be very nearly colourless and satisfactory from the point of view of cost.

Tile Manufacturer's Tragic Death.—Mr. Arthur Wm. Squires, C.C., tile manufacturer, who was in business near Stamford (Lincs.), died during May under very sad circumstanees. Deceased, who was 48 years of age, was accidentally shot in the abdomen whilst using a revolver to test tiles made for the War Office. At the inquest it was explained that the tiles had to be of a particular temper when burned ; if a bullet went clean through them they were rejected, as the tiles were supposed to shatter like earthenware. Deceased used to shoot at the tiles at long and short range, and it was whilst doing this that he received the fatal injury. Mr. Squires was a member of the Kesteven County Council.

Fires.—A fire occurred on April 29 at the works of the Caledonian Pottery Company, Rutherglen. A large brick

building, used as a straw store, took fire, and the offices and main works seemed likely to be involved. The Lanarkshire County and Glasgow Brigades were called, and after an hour's strenuous work they succeeded in confining the outbreak to the straw store, although at one time the roof of the offices was on fire. The damage to the shed and its contents was estimated at £400.——On May 17 a fire broke out on the works of Mr. R. Fenton, George-street, Hanley. The fire, which at one time threatened adjoining premises, was put out. The damage to the building is considerable, and damage to the stock is estimated at £80.

Lead Poisoning.—The total number of cases of lead poisoning reported to the Home Office under the Factory and Workshop Act during April, 1913, was 52, of which 1 was fatal. In addition, 20 cases of lead poisoning (6 of which were fatal) were reported among house painters and plumbers. During the four months ended April, 1913, the total number of cases of lead poisoning reported under the Factory and Workshop Act was 202, as compared with 177 in the corresponding period of 1912. The number of deaths was 8 in 1913, as compared with 12 in 1912. In addition there were 77 cases of lead poisoning (including 15 deaths) among house painters and plumbers during the first four months of 1913, as compared with 63 cases (including 8 deaths) in the corresponding period of 1912. Of the 52 reported cases of lead poisoning in April last under the Factory and Workshop Act, there were 4 cases, in connection with the china and earthenware trades, 3 of the persons affected being females. During the four months ended April, 1913, there were 26 reported cases and 4 deaths in our industries as compared with 26 cases and 5 deaths during the corresponding period of 1912.

Auction Room Prices.—At Christie's on April 29, £152 5s. was paid for a Kang-He famille-verte cylindrical vase, 18 in. high, a similar article, 20 in. high or octagonal shape, making £110 5s. During May, Mr. Amor paid 320 gs. for a large vase of Minton porcelain decorated by L. Solon, depicting some beautiful Greek girls wrestling before Lycurgus. A pair of vases and covers, 20 in. high, with nymphs and cupids disporting, brought 190 gs, and another pair, 23½ in., 140 guineas.——On May 23 Messrs. Christie sold the remainder of the Trapnell collection of Bristol porcelain, by order of Mr. A. Amor, of 31, St. James'-street, who bought the whole collection a year or so ago. The sale realised £4,933 18s. 6d. A teapot and five other articles of a service, made in 1776 by Champion for Sir Robert Smith, of Berechurch Hall, Colchester, realised 228 guineas; a pair of vases and covers, with canary-yellow ground, painted with flowers, in colours, 11¼ in. high, 210 guineas; a hexagonal vase, 12 in. high, 165 guineas; the Burke teapot, a sugar basin, a cream jug, and two cups, from the service presented by Champion to Mrs. Burke, 1,450 guineas. The teapot realised £251 in 1876, and was sold five years ago at Christie's for £441. A pair of hexagonal vases, 200 guineas; another pair, painted with birds and insects in panels with gilt scroll borders on blue scale-pattern ground (from the Romaine Callender collection), 160 guineas; a set of four allegorical figures of the Elements, 9½ in. high, 150 guineas; a pair of figures of a boy and girl, the former playing hurdy-gurdy and the latter dancing (modelled by Tebo), 100 guineas; a pair of figures, of a milkmaid carrying a pail, and a shepherd with a kid (modelled by Tebo), 55 guineas.

Commercial Travellers' Conference.—The thirtieth annual conference of the United Kingdom Commercial Travellers' Association was held at Newcastle-on-Tyne, from May 12 to May 14. Mr. W. J. Brown (Cardiff), the retiring chairman, presided first, and later the new chairman, Mr. A. Roberts (Birmingham). Mr. Gerald A. France, M.P., was elected president for the year. Mr. W. G. McMichael (Edinburgh) was unanimously elected hon. vice-president, and Mr. C. L. Schroeder (Newcastle) was elected vice-chairman. The Lord Mayor of Newcastle (Alderman J. F. Weidner), who was once a "commercial," attended the conference and gave a hearty welcome to the delegates. The report which was submitted stated that with reference to railway matters, that the concessions asked for on the resolutions of the Plymouth conference had been put forward and had been refused. Further request for revision of the conditions of the issue of week-end tickets, asking that the certificates for these tickets should be sent out only by recognised associations, had also been refused, and it was apparently useless to send up such requests, as they were met with a refusal on each occasion. On the subject of multiple shops the council had sent resolutions to the Prime Minister, the Board of Trade, and the Chancellor of the Exchequer, all of which had formally acknowledged. Personal interviews had been held with the Parliamentary Secretary of the Board of Trade in order to urge the council's point of view, but there did not appear to be any immediate prospect of action on the part of the Government. The report and balance sheet were adopted after some discussion. A motion "that the time for the nationalisation of railways has now arrived," was carried by 56 votes to 44. Other resolutions dealing with railway matters were passed. It was decided that week-end tickets ought only to be given to members of bona fide commercial travellers' associations, and that branches should regard the conviction of a member for the misuse of a commercial traveller's week-end ticket as detrimental to the interests of the Association, and necessitating compulsory expulsion from the branch. It was also agreed that the Railway Clearing House should be asked whether the distance limits for excess luggage cannot be revised. Complaint was made that the charge for a little over 50 is the same as for 500 miles. A motion condemning radius agreements was carried by 71 to 28. A suggestion from Weston-super-Mare that a national out-of-employment fund should be established was defeated. The annual collections amounted to considerably over £700. The next conference is to be held in Birmingham.

The Buyers' Provident Association.—The seventh annual general meeting was held at the Restaurant Frascati on May 6, there being a good attendance. In the absence through indisposition of Mr. W. Handford (president for the past year), the chair was taken by Mr. W. G. Amery. A vote of condolence was passed to Mr. Handford and the best wishes expressed for his speedy recovery. The report and accounts for the year ended March 31 were then unanimously passed. These testified to the increasing prosperity of this Association. The membership is now 310. The sum of £214 had been granted during the past year to members without employment or incapacitated through ill-health. Following the precedent of previous years the Board had forwarded donations to the following Institutions:—The Warehousemen Clerks and Drapers' Schools, the London Orphan Asylum, Watford, and the Furnishing Trades Benevolent Institution. The capital account now stands at £2,488. Mr. H. J. Clifford Martin, of John Barker & Co., Ltd., of Kensington, was unanimously elected president for the forthcoming year. Mr. Martin, in acknowledging the compliment, said he was justly proud to be president of such a successful Association, and would do his utmost to fulfil the duties allotted to him, and endeavour to show his appreciation of the confidence placed in him. An unanimous vote of thanks was passed to Mr. W. Handford, the retiring president, for his excellent work during the past year. Mr. A. G. Howell was re-elected hon. treasurer and cordially thanked for his past services, as were also

Messrs. Tinlings, who were re-elected hon. auditors. The following were elected to fill the vacancies on the Board of Management :—Messrs. Cecil J. Cooper (W. Whiteley, Ltd.), Rees Jones (John Barker & Co., Ltd.), W. D. Murgatroyd (W. Whiteley, Ltd.), W. J. Parsonage (Selfridge & Co., Ltd.), W. Fisher Sanders (Harrods, Ltd.), D. C. Goghan (William Owen, Ltd.), David Roberts (Harrods, Ltd.). A slight addition was made to the rules. Mr. T. T. Rutter, referring to the golf tournament held during the past year, said that it was hoped that during the coming year to hold a similar tournament for cups which would be presented for competition, probably by the past-presidents, either individually or collectively. Full details would be forwarded to members in due course. Mr. Rutter was cordially thanked for this. It was announced that the Board of the Warehousemen Clerks and Drapers' Schools had invited all members of the Association, together with their ladies, to visit the Schools at Purley on Saturday, June 14 next. Members wishing to do so are invited to communicate with the Secretary (Mr. T. W. King) in order that a party may be formed and special fares, &c., arranged.

TENDERS ACCEPTED.

For the Tottington (Lancs.) U.D.C. :—Mr. G. Brown, glass.

For the Belfast Corporation (Public Health Committee) : —Earthenware and glass for the Municipal Infectious Diseases Hospital for 1913-14, R. Lynas & Co., Belfast.

The following contract has been let in Victoria by the Commonwealth Government : — RAILWAYS : Siemens Brothers, porcelain insulators, 82,000 at £22 10s. per 1,000.

Contracts let by H.M. Government during April :— POST OFFICE : Insulators, Bullers, Ltd., Hanley ; Doulton & Co., Ltd., Burslem ; Taylor, Tunnicliff & Co., Ltd., Eastwood, Hanley.

For Stockport Board of Guardians :—Mr. T. Sutton, glass and china dealer, Stockport, jugs (3 doz.), 10s. doz. ; pint mugs (2 gross), 2s. 4d. doz. ; gill mugs (4 gross), 1s. 6d. doz. ; basins (1 gross), 1s. 9d. doz. ; tea plates (2 gross), 1s. 6d. doz. ; large plates (1 gross), 2s. 6d. doz. ; pudding plates (1 gross), 3s. doz. ; wine bottles (1 gross), 5s. doz. ; tumblers (1 gross), 3s. 3d. doz. Baxendale & Co., Manchester, 21 oz. English glass (1 crate), 2⅞d. ft. ; Hartley's roll glass (1 crate), 2⅛d. ft.

For Portsmouth Asylum Committee :—Mr. T. Bond, Portsmouth, teapots, 7s. doz. ; Hancock & Sons, Portsmouth, staff chambers, 10s. 6d. ; officers' meat dishes, £1 ; egg cups, 2s. 2d. ; hot water jugs, 8s. ; red water jugs, 30s. ; ladles, £1 ; blue band breakfast saucers, 1s. 6d. ; gold and white do., 2s. ; gold and white tea saucers, 1s. 6d. ; gold and white breakfast cups, 3s. 3d. ; do. tea cups, 2s. 8d. ; small glass dishes, 4s. 6d. C. Kemp & Son, Portsmouth, earthenware chambers, 6s. 3d. ; blue band dinner plates, 2s. 11d. ; dessert plates, 2s. 2d. ; mustard pots, 10s. ; messroom tumblers, 1s. 5d. ; officers' tumblers, 2s. Parkhouse & Sons, Portsmouth, butter dishes, 5s. 3d. ; white tea plates, 1s. 6d. ; jelly moulds, 7s. ; vegetable dishes with covers, 35s. ; blue band breakfast cups, 2s. 1d. ; white do., 2s. ; large glass dishes, 5s. 6d.

CONTRACTS OPEN.

Brighton Board of Guardians invites tenders by June 3 for earthenware. Tender forms from Mr. H. Burfield, Clerk, Parochial Offices.

The Committee of Visitors of the Hull City Asylum invites tenders by June 4, for glass and crockery for six months. Tender forms from Mr. H. A. Learoyd, clerk, Guildhall, Hull.

Birmingham City Education Committee invites tenders by June 6 for crockery, &c., for a new clinic at Handsworth. Tender forms from Mr. J. A. Palmer, Education Secretary, Margaret-street.

Tenders will be received at the office of the Deputy Postmaster-General, Melbourne, up to July 1, for the supply of 250,750 porcelain and stone insulators, and 3,750 porcelain tubes (Schedule No. 874) ; and 149,000 insulators and 23,000 porcelain tubes (Schedule No. 875). A deposit of 5 per cent. on the first £1,000, and of 2½ per cent. on the amount above that sum, is required with each tender. Forms of tender can be obtained from the High Commissioner in London for the Commonwealth of Australia, 72, Victoria-st., S.W., where also preliminary deposits may be paid. Local representation is necessary.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "THE POTTERY GAZETTE." and are strictly copyright.

Mr. Hugh Marks, of Randalstown, Ireland, is going into the glass and china business.

Mr. F. G. Rainbow, glass merchant, has opened premises at 18, Sheep-street, Rugby.

Lawleys, Ltd., of Birmingham, have opened a fine branch shop at 48, George-street, Plymouth, with Mr. S. B. Henderson as manager.

Mr. Butterfield, glass and china dealer, is leaving the premises at 8, Mount-street, Oatlands Mount, Harrogate, owing to the expiration of tenancy.

Hyman A. Abrahams & Sons, late of 65 and 66, Houndsditch, and 29, Camomile-street, E., have removed to more central premises at 30, St. Bride-street, E.C.

C. E. Ramsden & Co. have opened out with electrically-driven machinery at Liverpool-road, Stoke-on-Trent, as manufacturers of colours and chemicals for potters, glassmakers and enamellers on metal. They are specialising in enamel and underglaze colours for all purposes.

NEW COMPANIES, COMPANY REPORTS, &c.

Glenboig Union Fire Clay Co., Ltd.—The directors have declared an interim dividend of 10 per cent., free of income tax.

Welsh Glass and Bevelling Co., Ltd.—This private company has been formed with a registered capital of £2,000 in £1 shares. Objects are indicated by the title.

W. A. Norton, Ltd.—This private company has been registered with a capital of £500, in £1 shares. Objects, to carry on the business of dealers in glass and china. The signatories are W. A. Norton, 26, Church-lane, and J. Wiggin, 51, St. Peter's-road, Birmingham.

New English Glass Manufacturers, Ltd.—Registered capital £12,000 in £1 shares. Objects, to carry on the business of glass manufacturers and workers, mirror manufacturers, bottle makers, makers of electrical appliances, &c. The subscribers are : A. F. Prince, 190, High-street, Dudley, licensing officer ; S. Pearson, 6, Charles-street, West Bromwich, bottle manufacturer. Private company.

Brownlow W. Blades, Ltd.—Registered capital £4,000 in £1 shares. Objects, to adopt an agreement with J. H. Blades, B. W. Blades, and E. C. Blades for the acquisition of certain assets of the business of brick and tile manufacturers carried on by them at Swan Farm Brickworks, West Bromwich. Private company. The first directors are J. H. Blades, B. W. Blades, E. C. Blades, and F. W. T. Hartland.

Lovatt & Lovatt, Ltd.—Registered capital, £70.000, in £1 shares. Objects : To take over the business of manufacturers of stoneware pottery carried on by Lovatt & Lovatt at the Pottery, Langley Mill, Derby. The signatories are :—J. Lovatt, 24, Villa-road, Nottingham, pottery manufacturer ; A. E. Lovatt, Ashfields, Heanor,

Derby, pottery manufacturer, who also are to be the first directors. Registered office, The Pottery, Langley Mill, Derby. Private company.

Liens, Debentures, Satisfactions, &c.—Deal Potteries, Ltd.—Registered, £100 debentures, to E. Chitty, Sonnenburg, Castle-av., Dover, secured by general charge.——Furnivals (1913), Ltd.—Particulars of £6,000 debentures have been filed, the whole amount being now issued. Charged on the company's undertaking and property, present and future, including uncalled capital.——Mintons, Ltd., Stoke-on-Trent.—Satisfaction registered for £6,000, part of amount outstanding July 1, 1908.——Carne Stents China Clays, Ltd., Plymouth.—Registered £5,000 debentures, secured by general charge, also satisfaction for £5,000 registered Jan. 20, 1908.——Central Potters' Mills, Ltd.—A further charge on land in Hanley with mill premises, &c., has been registered thereon, to secure £1,500 (supplemental to existing mortgage).

St. Austell China-Clay Works, Ltd.—The annual general meeting was held in London on April 30. Mr. D. George Collins (chairman) presided, and in moving the adoption of the report and accounts, stated that the reports from the works continued in a satisfactory strain, while they were now endeavouring to arrange contracts at prices exceeding 30s. a ton for their best clay. They also found that their mica clay had captured the market, and they anticipated an advance in the price they were now obtaining for it. As the result of a careful examination of the finances of the company, the directors had come to the conclusion that morning that it would be possible almost immediately to distribute a dividend to the preference shareholders. He believed that the year 1913 would be a substantially good one for the company, while the year 1914 would make for prosperity and dividends to the whole of the shareholders. The motion was carried unanimously, and it was also agreed : "That the capital of the company be reduced from £44,000 divided into 4,000 7 per cent. cumulative preference shares of £1 each and 40,000 ordinary shares of £1 each, to £24,000, divided into 4,000 7 per cent. cumulative preference shares of £1 each and 40,000 ordinary shares of 10s. each, and that such reduction be effected by reducing the nominal amount of the ordinary shares from £1 to 10s. each."

Legal.

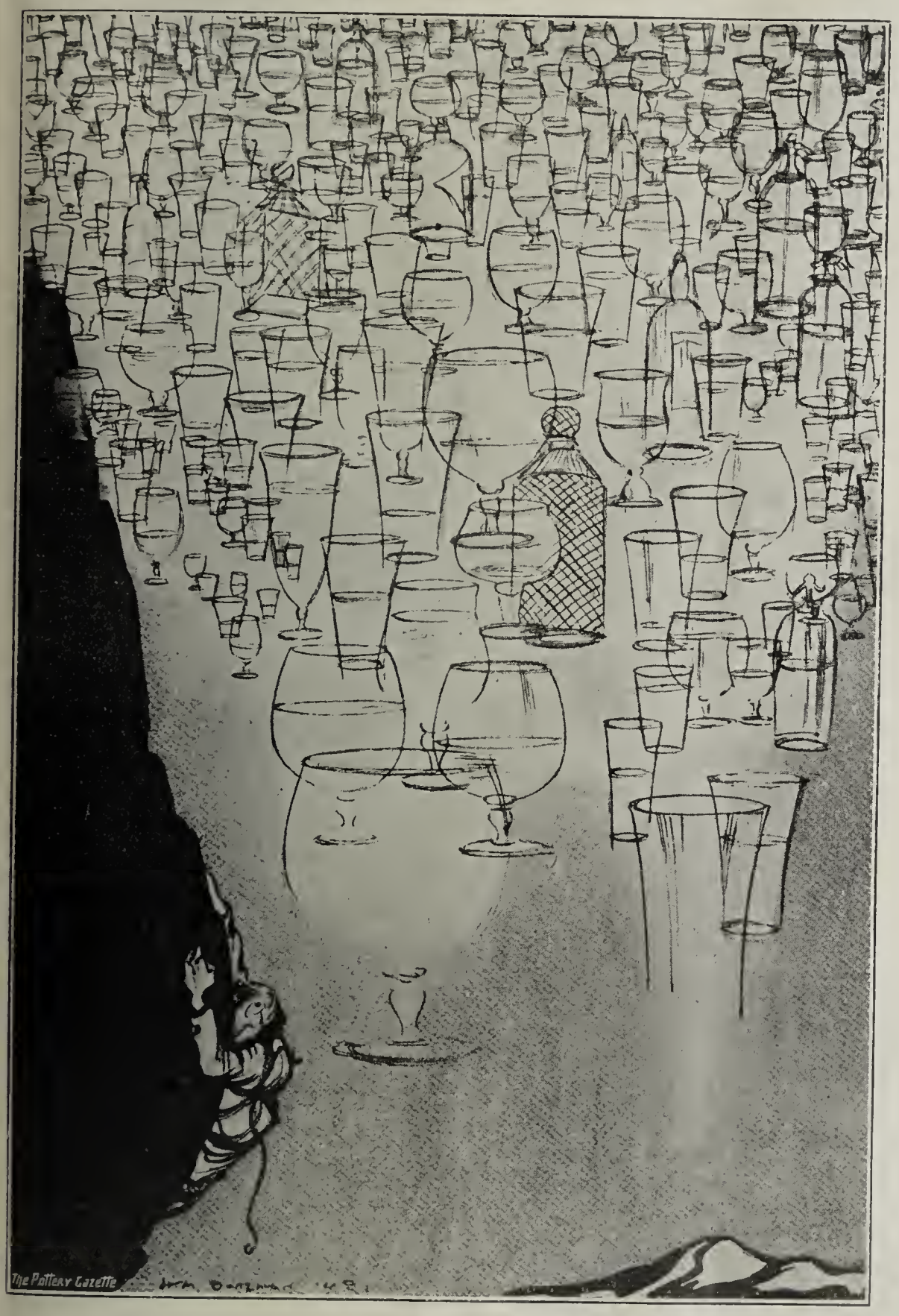
Hawkers and the Shops Act.—At Stafford, on May 5, Edward Walley, Burslem, was summoned for a breach of the Shops Act Order relating to glass and china dealers at Stafford by hawking crockery after 1 p.m. on the early closing day. Defendant, who stated that he was not aware that an Order was in force, was ordered to pay 9s. costs.

The Sale of a China Collection.—An action by Mr. Edgar Gorer, art dealer, of Bond-street, against Sir Wm. H. Lever, was heard by Mr. Justice Darling in the King's Bench on May 23. Mr. F. E. Smith, for the defendant, said plaintiff had given notice of the discontinuance of his claim, and Sir William Lever was plaintiff on the counter-claim. The point to be dealt with was a question of law, and it arose on the contract under which Sir William bought from plaintiff the Richard Bennett collection of Oriental porcelain. It was agreed that the defendant should pay plaintiff £275,000 for the collection in twenty quarterly instalments, and that plaintiff should instal the whole collection at the Hume Hall, Port Sunlight. Sir William paid four instalments amounting to £55,000, and now he wanted to exercise the option reserved to him under the contract of putting an end to the purchase and calling upon the plaintiff to take back the collection. Plaintiff was willing to do that, but Sir William was at present £55,000 out of pocket, and he said he ought not to hand over the whole collection unless repayment of the £55,000 was secured him on the sale of the collection elsewhere. Sir Edward Carson, for the plaintiff, said the contention of Sir William all through had been that he merely got the loan of the collection at Port Sunlight with a certain option. Plaintiff was quite willing to take the property into his own gallery, and mark each piece, "Richard Bennett collection on sale for Sir Wm. Hesketh Lever." His Lordship said he would not give the declaration asked for by Mr. Smith, but gave plaintiff permission to remove the collection to his warehouse for sale. He thought Mr. Smith was wrong in the construction he asked him (the judge) to put on the wording of the contract.

Earthenware Traveller's Death.—At the May sitting of the Leigh (Lancs.) County Court, before Judge Stanger, K.C., Roberts & Sons, earthenware dealers, Leigh, were the respondents in an action brought by Mary Howard, 22, Queen-street, Warrington, who claimed compensation in respect of the death of her husband, who was for seven years traveller and salesman for the firm. For the applicant it was stated that deceased visited markets at Leigh, Warrington, and Earleston for the firm, and each Wednesday he accompanied Mr. Thos. Roberts, one of the partners, to Leigh to get out the orders he had received, and returned home on Fridays. On Oct. 2, Mr. Thos. Roberts called for deceased to go to Leigh by train, deceased carrying his bag of samples. At West Leigh Station, deceased got out of the train before it stopped, and was drawn between the platform and the carriage board and killed. The usual claim for compensation was sent in. but the insurance company declined to pay, denying that deceased was a servant of the respondents. A request for arbitration was then filed, and it was then not denied that deceased was a servant of the firm, but it was pleaded that the accident did not arise out of the deceased's employment. It was added that deceased earned from £1 15s. to £2 per week, and that his widow was in business as an earthenware dealer. For the insurance company it was urged that Howard was only a casual worker, and not a servant, and that it was on his own suggestion that he went to West Leigh, when he met by his death, to be ready for work the next day. He was not, therefore, working for the respondents at the time of his death, and such death did not arise out of and in the course of his employment. The Judge took a diverse view of these arguments, and advised a settlement, with the result that the applicant was awarded £100 and costs on Scale B.

Glass Firm's Action.—At Belfast County Court, on May 1, Judge Craig gave judgment in the action brought by Campbell Brothers, glass merchants, 19-23, Franklin-street, Belfast, against the City of Dublin Steam Packet Co. to recover £6 15s. for alleged breach of contract to carry a crate of glass from Belfast to Dublin. His Honour said that the glass was of an unusual description, which did not affect the case except as regards damages. The case had been twice argued—the first time on the basis that the steamship company, though common carriers, were not within the Railway and Canal Traffic Act. He was prepared to have given judgment on the authorities cited, but was asked to let the case stand for further argument, and then quite another state of things appeared. He thought he had reason to complain that this Act of the steamship company was not brought into the argument on the first occasion. The City of Dublin Steam Packet Co.'s Act of 1895 changed the whole aspect of the case, and brought the company within the Railway

and Canal Traffic Act. That gave him a right to say whether the condition was a reasonable or was not a reasonable one to propose. The condition was that if A sent goods to B, A being under promise to deliver goods in Dublin, but did not prepay carriage, that the company had a right to stop A's goods in respect of any default in the matter of carriage that B might owe the company. That seemed to the Court one of the most unreasonable things that could be put forward, and he would hold that it was bad and ultra vires. On the subject of damages, he would adjourn the question till next session for some arrangement to be made between the parties for the return and disposal of the glass in question in the meantime, to determine its present value, and he would then fix a reasonable sum.



THE DROP.

"In that awful moment the whole of my past life flashed before me!"

By H. M. BATEMAN.

[This clever drawing, interesting to the glass trade from the variety of vessels illustrated, is reproduced from "Printers' Pie" by kind permission of Mr. Hugh Spottiswoode, the Editor.—EDS. P. G.]

Empire Notes.

Empty Bottles of all sizes, except fancy bottles or decanters, are dutiable on importation into the Seychelles Is. at 1 ct. per bottle, instead of 12½ per cent. ad val. as formerly.

Stilts (for use in manufacturing pottery) are dutiable on importation into British S. Africa at 15 per cent., with a preferential rebate of 3 per cent., according to a recent customs decision.

Canadian Tariff Decisions.—(P, equals Preferential Tariff, I, Intermediate Tariff, and G, General Tariff.) Felspar, crushed, P 15 per cent. ad val.; I, 17½ per cent. ad val.; G, 17½ per cent. ad val. Felspar, crude, free. Shelves of glass P, 20 per cent. ad val.; I, 27½ per cent. ad val.; G, 30 per cent. ad val.

Trade Openings in Canada.—Inquiry is made by a merchant at Halifax, Nova Scotia, for the names of United Kingdom manufacturers of architectural terra cotta, facing bricks, chimney pots, vitrified bricks, &c.——A lumber and concrete company in Ontario is contemplating the purchase of a 5-ton brick-making machine and tile-making machinery. Further information may be obtained at the offices of the High Commissioner for Canada, 17, Victoria-street, S.W., on mentioning THE POTTERY GAZETTE.

Canadian Imports during the nine months ending December, 1912, included the following items:—Earthen and china-ware: Tableware of china, porcelain, white granite or iron stoneware, United Kingdom, $1,080,043; United States, $24,560 (d); Austria-Hungary, $53,285; France, $143,530; Germany, $270,292; Japan, $82,256; other countries, $12,214; total, $1,666,180. Other earthen and china ware, United Kingdom, $349,222; United States, $429,609; Germany, $32,709; Japan, $13,625; other countries, $31,657 (d); total, $856,822. Glass and manufactures of United Kingdom, $1,172,757; United States, $1,561,288; other countries, $1,389,184; total, $4,123,229. The figures only show two decreases, and they are indicated by (d).

Glassware in India.—The German Consul at Calcutta reports that amongst the category of glass and glassware the most important place is filled by the cheap many-coloured glass bracelets worn by poor-class Indian women; these goods are practically monopolised by Bohemia. Glass beads are also extremely used as a means of personal decoration, and are obtained from Germany, Austria-Hungary, Belgium, and Japan; the latter country has begun to be a serious rival during the past two years. Glass bottles, and, in particular, Codd's patents for mineral waters, are supplied by Great Britain, Germany sending over only medicine bottles. Window-glass is all Belgian, and Austria is now almost monopolising the trade in lamp-glasses, to the detriment of Germany.

The Import of Glassware into Sierra Leone during 1911 was derived from the following countries. The values for 1910

are given in brackets for comparison :—United Kingdom (£661), £542 ; British West African Possessions (£8), £16; France (£15), £3; Germany (£535), £1,070; Holland (£205), £332 ; other European countries (£40), £38 ; foreign West African Possessions (£17), £10; other countries, —, £1 ; total (£1,481), £2,012. There are for these goods two distinct classes of customers, one consisting of Europeans and the superior natives, the other, which is much the larger, wholly of natives. The former derives its supply mainly from the United Kingdom, which provides goods of generally better quality. The latter demands goods which are attractive in appearance and low in price, and in order to meet this demand quality must perforce be sacrificed.

Pottery and Glass in the Straits Settlements.—A recent report by the Registrar of Imports and Exports states that the cheapest and roughest class of crockery comes from China (cups, saucers, bowls, and plates), besides large quantities of bathing jars in blue enamel and fancy outer designs and earthen pots and jars at low prices. European cups, saucers, and plates are low-priced German, but plates from England are now being imported in larger quantities in response to the demand for slightly superior qualities. A quarter of the total United Kingdom import values was earthenware drain pipes, &c., of which not much is received from the Continent. Bottles for aerated waters and druggists, &c., are from the United Kingdom almost entirely, the value in 1911 reaching over £13,000, compared with a little over £1,000 value from the Continent, but Japan sends water bottles and decanters to the value of nearly £12,000. Window glass is of Belgian make, also lamp chimneys, which represent a considerable business, while Germany sends cheap glass lamps, probably often declared as glassware. The Continental trade is being cut into by Japan, which sells goods comparing favourably with the cheapest German makes as low as 7d. a dozen for half-pint tumblers, and others in proportion. The fancy class of vases and flower holders are mainly Austrian. The same reason, viz., price, curtails sales of English glassware, which is bought only by the European and richest class of Chinese. Glass lamps are German, sold at such prices as British manufacturers would not care to touch. There has sprung up a business in cups of metal, glass and porcelain for the collection of the latex of the Para rubber tree, and Japan is rapidly taking front rank in porcelain and glass cups, beautifully finished, without that roughness inside which characterises the same class of British porcelain, and in much superior packing, while the price is nearly 10 per cent. lower.

Pottery Imports of S. Nigeria.—In a report just published the British Commercial Intelligence Officer for S. Nigeria says :—In 1907 the combined share of the earthenware business taken by Germany and Holland was about one-ninth of the whole, as compared with one-quarter in 1911. The reason given by local merchants is that Continental suppliers show more originality in shape, design and colouring than the general run of makers in the United Kingdom. In this particular business, my personal opinion is that the Continental designs and shapes have appealed more to the natives than the old stereotyped patterns with the crudest of colourings shipped from the United Kingdom, and that it is not a question of lower prices. About one-half the total Southern Nigeria imports of earthenware are handled at Lagos, which may be fairly described as the most progressive business centre in West Africa. Ten years ago the receipts of earthenware at that port from Germany averaged under £400 per annum, and nothing came from Holland. In 1910-11 the average receipts per annum at Lagos from Germany was £2,000 and from Holland £3,700. Putting it another way, Germany and Holland together secured 35 per cent. of the whole earthenware trade at Lagos in 1910-11, as compared with 8 per cent. only ten years ago. It is figures such as these which bring home to one the activity of foreign competitors in classes of goods in which we formerly did nine-tenths of the trade, and in which our position was considered fairly secure. We have in smoking pipes a very small class of goods, another illustration of progress made by foreign competitors at the expense of British makers. In 1907 Germany and Holland together did about one-quarter of the whole business in smoking pipes ; to-day they are securing 60 per cent. The local merchants attribute the loss of the United Kingdom's trade to cheaper pipes obtained on the Continent. It is regrettable that in a trade such as this, where labour forms a very large proportion of the cost of the finished article, we should find the trade falling into other hands. If the shipments from the United Kingdom had increased in proportion to the total pipe trade in Nigeria, the business in British supplies of these goods would be double what it is to-day The bulk of the pipes imported are clay ones (white and torrified), and I believe the industry for the West African export trade is more particularly carried on at Glasgow and Manchester.

MOTOR VEHICLES FOR POTTERY DISTRIBUTION.

MORE and more the petrol motor is taking the place of the horse as the motive force of business and pleasure vehicles. The motor-car and the motor 'bus have, in turn, won their place on our streets and highways, and the motor van or lurry is fast coming to the front as a rapid and economical means for the conveyance of goods. We heartily welcome any innovation that tends to facilitate commercial operations, and we look forward to the time when the competition of motor traffic will oblige the railways of this country to adopt a more reasonable attitude in dealing with traders.

Just now, however, the phase of commercial motoring with which we have to deal is its application to the distribution of wares by dealers ; and its possibilities in this respect are exemplified by the illustration which we reproduce of the " fleet " of motor vans used since August of last year by J. Taylor & Sons, of the Spa Pottery, 344, St. James's-rd., Old Kent-rd., S.E. The fact that this enterprising firm has



J. Taylor & Sons' Motor Vans.

found it worth while to invest in these three vehicles speaks eloquently of their utility and reliability. They comprise a Belsize 10-12 h.p. light van, a C.P.T. 20 h.p. 25-cwt. van, and a Halford 32 h.p. 50 cwt. van. They must greatly extend the range of operations and materially assist in ensuring prompt delivery, We anticipate that motor distribution will find considerable developments in the pottery and glass trades in the near future.

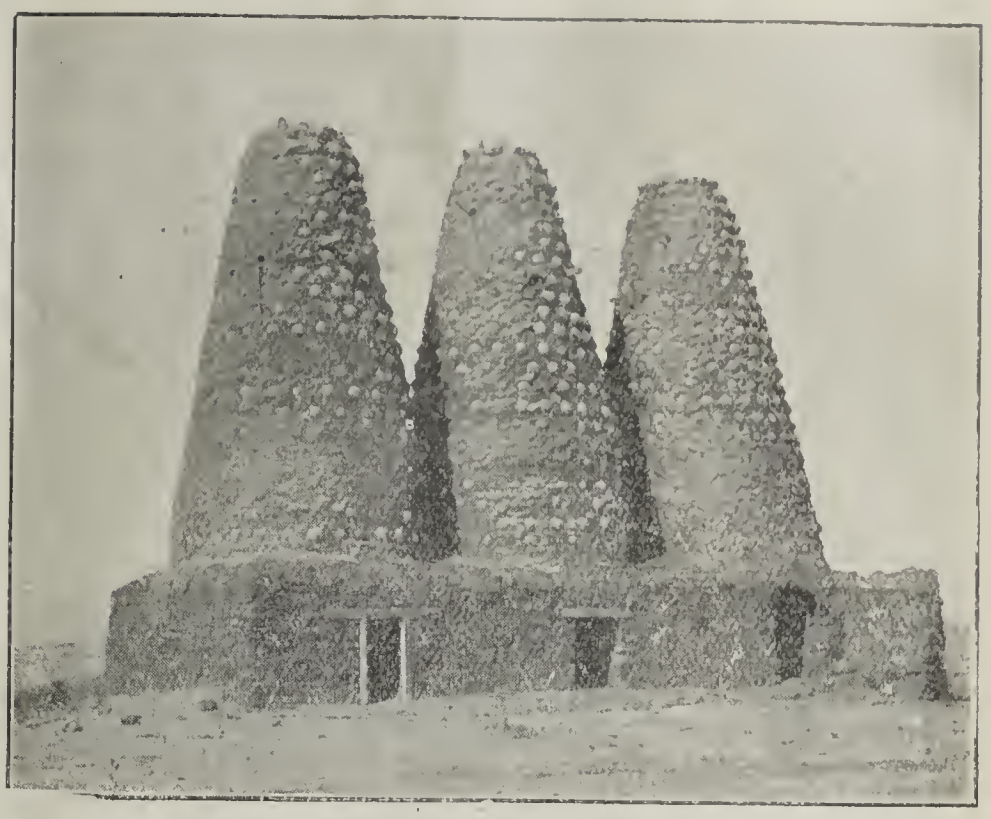
Foreign Notes.

Mr. Richard Briggs, of the Richard Briggs Co., china and glass merchants, 116, Boylston-street, Boston, U.S.A., sailed for Europe on May 13.

B. F. Drakenfeld & Co., manufacturers and importers of potters' colours and materials, have removed from 27, Park-place, New York City, U.S.A., where they have been located for the last 32 years, to a new building at 50, Murray-street.

The German Porcelain Industry.—The report of the Bayreuth Chamber of Commerce complains of the low prices obtaining in one of the chief centres of the German porcelain industry in 1912. Upper Franconia has 47 porcelain works, employing about 12,100 hands, as compared with 41 works and 11,000 hands in 1910. The ware is fired in 235 kilns, of an average cubic capacity of 2,470 cubic feet. Thirty-six of the works employ over 100 hands, 23 more than 200, 19 more than 300, 9 more than 400, 7 more than 500, 5 more than 600, one about 1,000, and one about 1,600 hands. In addition to tableware of all grades up to the finest articles de luxe, the works turn out electro-technical porcelain, insulators, art ware, toys, vases, jardinieres, figures (especially groups of animals), dolls' heads, &c. The course of business was about on a par with the previous year, but, owing to enlarged premises and the resulting keen competition, prices ruled low, so that even the Manufacturers' Association was unable to maintain the fixed rates. In the export trade, an improvement was observed in the North American and Canadian demand, both very important markets, and great hopes are held of better trade with the United States, it being expected that goods of a higher class than that sold of late years will be taken. The Presidential election hampered business, and since then the prospects of a reduction in the tariff have caused buyers to hold back and order small parcels only. This, however, cannot continue long, as the stocks on the other side must be nearly exhausted. The trade with other countries was approximately normal, except with the East, the Balkan war having practically stopped all buying, and at the same time has delayed payment of outstanding accounts, even by the best houses. The home market was good, but, as stated above, prices were kept down by competition. The local industry also lost many important orders through the lock-out early in the spring. On the dissolution of the old association of manufacturers, a new one was formed, but did not receive the adherence of all the old members, and a struggle ensued between the Association and the outsiders, the result being a further lowering of prices.

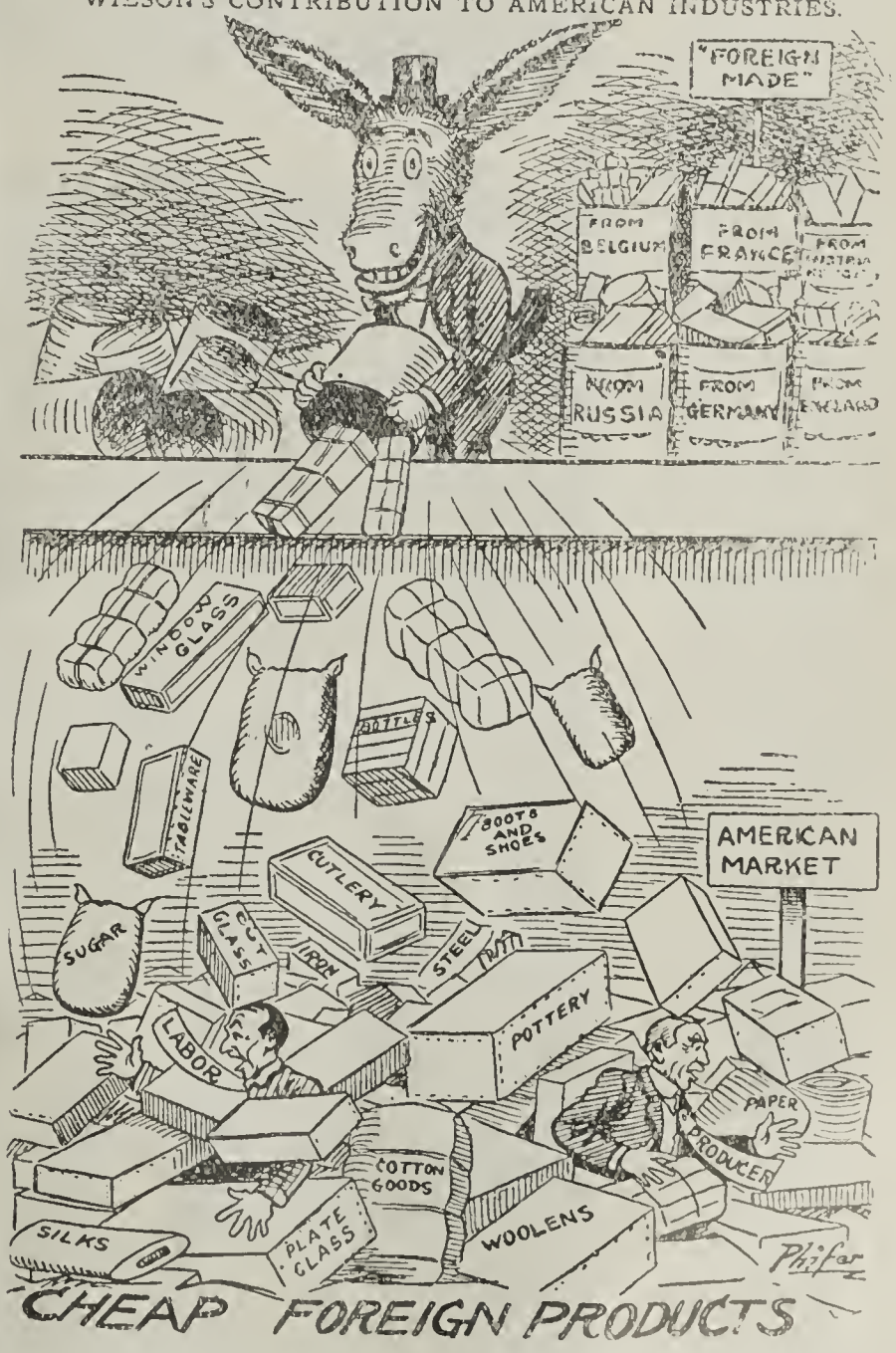
An Arab Dovecote.—This curious erection, for the illustration of which we are indebted to the "Sunday at Home," will appear strangely familiar to our readers in the Potteries; partly, no doubt, because of the kiln-like shape of the structures; and partly because the dovecote, being built of old water jars set in mud, is strongly reminiscent of the many uses to which saggars and broken crocks are put in the foundations and walls of many buildings in the Six Towns.



AN ARAB DOVECOTE.

An American View of the Tariff Question.—This cartoon reproduced from the "National Glass Budget" illustrates

WILSON'S CONTRIBUTION TO AMERICAN INDUSTRIES.



admirably the view taken by some American manufacturers of the Tariff Revision proposals.

SCENES IN A SPANISH POTTERY.

THESE photographs, supplied by the "Daily Mirror Illustrations Bureau," were taken at the pottery of Manuel Corbuto, in the Gipsy quarter of Seville. It is stated that the workers are expert in reproducing the styles of ancient potters.



A GLAZING OVEN.



A CORNER OF THE SHOW ROOM.

Fragments.

¶ Owing to items of special interest appearing in the last two issues of THE POTTERY GAZETTE, we have had an unusual number of applications for single copies. The moral is that everyone in the trade should subscribe regularly, as there is sure to be something of special value in every issue.

* * *

¶ The two Editorial Notes which refer to subjects mentioned under "Correspondence" were both drafted before the respective letters came to hand. Whether this be due to a "brain wave" or a mere coincidence we welcome it as evidence that "great minds think alike."

* * *

¶ Our notes on the Shops Act and early closing should be useful to travellers by helping them to avoid fruitless calls. By the way, at least one retailer mentions his early closing day in his local paper advertising; a very good plan when customers are likely to come from a distance and go away disappointed.

* * *

¶ Stafford House has been presented to the nation as a home for the London Museum. What an opportunity has been missed by the wealthy donor, who might have changed the name of the building to "Staffordshire House," and initiated there a national ceramic museum.

* * *

¶ The complaint from S. Africa as to the tardy delivery of goods (p. 689) scarcely harmonises with the reports of bad trade in the Potteries—except that such delays often lead to loss of orders and so ultimately to trade slackness.

* * *

¶ Quite a number of New York pottery importers are moving from the Murray-street district to premises further "up town." We are pleased to learn that so many of our friends are on the up grade—for this world at any rate.

* * *

¶ A Chinese general has been killed by a bomb packed in a box which was supposed to contain a piece of fine porcelain. We trust that the "Suffragettes" will not employ similar stratagems, as they might be rather bad for the pottery trade.

* * *

¶ A popular magazine in the United States is now taking up the industrial lead-poisoning question; but even American journalism can hardly handle it more hysterically than some controversialists on this side of "the pond."

* * *

¶ A china manufacturer visited the showrooms of a well-known agent last month, and said to the girl dusting the cups and saucers, "Are you the girl who breaks the handles off?" "No, sir," said the girl. "Good," said the manufacturer, as he gave her a shilling. "But you won't break any more off," he added laughingly, "and you will keep them clean," he said as he gave her another shilling. "Thank you, sir," said the girl, pocketing the coin, "I'm going to leave!" Exit manufacturer, and the agent's smile "won't come off."

* * *

¶ Several amusing anecdotes are being circulated in connection with the recent Royal Visit to the Potteries. It is said that the King, while watching a clever workman in pottery, asked: "I suppose you make them in various shapes?" "Yes, your Majesty," answered the potter, "we make 'em in round, square and oxygen." After this who will venture to state that the chemical side of the industry is being neglected? "CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

INDUSTRIALLY the Potteries district is in a disturbed and unsettled condition, such as is detrimental alike to employers and operatives. Trade is not in a satisfactory state, and this is aggravated by the continuance of the three sectional strikes. It is true that they are only sectional disputes, and directly affect a comparatively small proportion of the pottery workers, but indirectly they concern many more employees and add to the difficulties of manufacturers. The dispute in the marl industry, strictly speaking, is outside the pottery trades, but it is affecting every manufacturer, and had it not been possible to secure supplies of wad clay and sagger marl from outside the district, the majority of the manufactories would have had to close down. As it is, the stoppage in marl getting has caused potters great inconvenience, and added to their expenses at a time when costs of production are high enough. Then the new Pottery Regulations are being gradually put into operation, so that with first one thing and afterwards another, the lot of the manufacturer just now is "not a happy one."

With regard to the condition of trade, opinions differ, as they generally do, owing to the variety of products and the multiplicity of markets served, but the position seems to be tersely and appropriately summed up in the remark made to me by one manufacturer this week. "The Colonial trade," he said, "is brisk, the American is bad, and the home trade is nothing to brag about." There is, at any rate, some satisfaction in these times of pessimistic remarks in still being able to say that business with the younger countries of the Empire continues brisk. The Colonial demand, indeed, seems invariably to be the saving feature of the situation. The buoyancy of the Canadian market is everywhere admitted, and the enhanced trade of the last two months is due obviously to the prosperity and increasing wants of that great country, aided, of course, by the passing of the winter freight rates. Trade with the Antipodes has not for some time been all that could be desired, but there are signs of improvement. The East Indian demand is good, and the South African steady. The South American markets are also contributing fairly well to the sum total of business. With regard to the United States, the description "bad" appears to need no qualification, except that the decline may precede a brisker demand than has been experienced for a long time. It was, of course, expected that the American importers and retailers would limit their buying as soon as there was a prospect of tariff reduction, but some are of opinion that they are holding back to such an extent as to diminish their own sales owing to the lack of variety that must accompany light stocks. The Tariff Bill has passed the House of Representatives, but it is not yet through the Senate, and it is still possible for the tariff schedule to be amended, for, in response to the American potters' protest against the proposed reductions, President Wilson has instituted an inquiry by the Department of Commerce into the relative positions of the American and the European potting industries.

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The home departments of the earthenware and china trades are generally considered to be somewhat better than they were a month ago, but it is quite true there is "nothing to brag about." The chief complaint appears to be in regard to the London market, which, of course, represents the cream of the home trade, but there is generally a lack of buoyancy and steadiness in demand. There are still a number of factories on short time, but there are plenty that continue to be busily occupied; in fact, no general statement meets the case. The Whitsuntide holidays, for instance, varied greatly, ranging from a day to a week, the latter being an exceptionally long break for this period of the year. With regard to the jet and rockingham branch, the state of disorganisation which obtained at the end of last month, owing to the strike, has become worse. The number concerned in the dispute is about 500, but the cessation of making ware has naturally affected other workers; for instance, the packers, who, having dealt with the goods coming from the ovens and in stock, have had to join for the time being the ranks of the unemployed. With the present unsatisfactory condition of the home trade, the prospective increase in railway rates is unwelcome though expected, and the burden, of course, will fall in the largest degree on goods for consumers in this country, because of the longer distances which they have to be conveyed by rail in most cases. The North Staffordshire Railway Co., in common with the great trunk companies, have now issued their notice of increases.

Last month I stated that the Manufacturers' Association had requested the North Staffordshire Coal Owners' Association to receive a deputation "to discuss the disastrous effect which the present high price of fuel is having upon the potting industry of the district." That deputation has been received, but the colliery proprietors were unable to promise the manufacturers any concessions. The coal owners contend that the burdens placed upon them by legislation during the last couple of years, together with the increases in miners' wages, have been in excess of the benefits derived from the higher prices of fuel. Recently, I had a conversation with a local colliery manager on this subject, and he assured me that the colliery proprietors had not recouped themselves, but were, in fact, a good deal worse off than they were, say, a couple of years ago. The Eight Hours Act reduced outputs and increased cost of production; the Insurance act, as in other industries, largely augmented their expenditure; the Minimum Wage Act added enormously to their wage bills; and the Coal Mines Act increased, and will further increase when fully in operation, the cost of getting and raising coal. There is another important aspect which he pointed out. Miners' wages are now at a maximum, and the men, by working full time, can earn more money than ever before. It may be uncomplimentary to the miners to say it, but it is nevertheless a fact, that high wages do not conduce to regularity of work. As a result, colliery proprietors, my informant said, are finding it impossible to maintain their output. The high price of fuel is exceedingly burdensome to pottery manufacturers, but obviously there is a good deal to be said on the coal-owners' side.

The strikes in the jet and rockingham trade, and the cane-and-white department of the sanitary ware business, have now (May 24) been in operation nine weeks, and the dispute of the marl workers six weeks, but settlement is not yet in sight, though a speedy adjustment of differences is not impossible. I will deal first with the strike in the jet and rockingham trade. The matter is not easy of explanation, for the demands of the men and the offers of the masters are in different denominations, and there is the further complication of counts, a difficulty which always arises in discussing potting trade problems. Briefly, the operatives ask for an increase of a halfpenny a dozen of 24 for jiggerers, throwers, turners and handlers on rockingham teapots; 5 per cent. increase for all women clayworkers, and a penny per board on white teapots made at rockingham factories. There are other and subsidiary demands for readjustment of prices and conditions, but these are the chief. The discussion that has taken place during the strike has chiefly concerned the halfpenny increase to jiggerers, throwers, turners, and handlers of rockingham teapots, and had a settlement been reached on that point the other matters might have been speedily dealt with. With regard to the advance asked for on white teapots, the operatives' contention is that they are only applying for an increase which will something like bring them into line with the prices paid on earthenware factories for a similar class of goods.

Immediately after the stoppage, the Jet and Rockingham section of the Manufacturers' Association met representatives of the National Union of Male and Female Pottery Workers in conference, but a settlement was found to be impossible. Other meetings followed with like result. On Thursday, May 22, another conference took place, and that both sides earnestly endeavoured to reach an arrangement is evidenced by the fact that the meeting continued from half-past ten in the morning until nearly half-past seven at night. Offers were made on both sides, but eventually the manufacturers made the following "final" proposal, without prejudice:—

(1) An advance on rockingham teapots of: 5 per cent. to jiggerers, 5 per cent. to throwers, 5 per cent. to turners, 5 per cent. to handlers, $2\frac{1}{2}$ per cent. to spoutmakers, $2\frac{1}{2}$ per cent. to covermakers, $2\frac{1}{2}$ per cent. to women jolliers.
(2) An advance on white teapots of: $7\frac{1}{2}$ per cent. to jiggerers, $7\frac{1}{2}$ per cent. to throwers, $7\frac{1}{2}$ per cent. to turners, $7\frac{1}{2}$ per cent. to handlers.
(3) All other notices to be withdrawn.
(4) The settlement to be for a period of two years from March 25, 1913.

It is difficult to compare these offers with the men's demands, but the following is an approximate comparison:—Rockingham jiggerers, throwers, turners, and handlers: Operatives ask for $8\frac{1}{3}$ per cent; employers offer 5 per cent. Women clayworkers: Operatives ask for 5 per cent.; employers offer $2\frac{1}{2}$ per cent. White teapot jiggerers, throwers, turners, and handlers: Operatives ask for $33\frac{1}{3}$ per cent.; employers offer $7\frac{1}{2}$ per cent. The employers' contention is that owing to the largely increased cost of manufacture arising from many causes, it is impossible to meet the men's demands in full and still trade at a profit.

Following the conference at which these proposals were made, the operatives held a meeting at Burslem on Friday, May 23, when the details of the negotiations were privately submitted to the workers. The net result was that the operatives unanimously rejected the manufacturers' offer, and firmly adhered to their original demand for a halfpenny per dozen more for rockingham jiggerers, throwers, turners, and handlers. The workers' representatives explained certain alternative proposals which they had made at the conference, and the meeting approved them. In one respect, however, the Union officials' action was disapproved. They had consented, subject to the opera-

tives' decision, to aeeept 2½ per eent. for women elay-workers, in order to effect a compromise, but at the meeting the women expressed determination to stand by their original demand of 5 per eent. This refusal of the masters' offer was communieated to the employers on Saturday, May 24, and though the proposals were described as "final," it is probable that a further eonferenee will take plaee. It is eertainly to be hoped that the dispute will be speedily settled, for, in addition to the total disorganisation of the jet and roekingham business, it has eaused great distress among many workers. [The settlement of the dispute is announced elsewhere in this issue.—Eds. P. G.] The strike of cane-and-white workers in the sanitary ware trade is a mueh smaller matter. It affects six of what may be termed smaller firms, and some 120 workers. The men ask that their making priees may be brought up to the standard obtaining at the larger firms. The Manufaeturers' Assoeiation is not eoncerned in this dispute, the firms in question being outside the Assoeiation.

The strike among the marl workers has been in operation for six weeks, and over a thousand men are out of employment. About three-quarters of the marl workers are members of the Navvies' and General Labourers' Union, but the remaining 25 per eent. joined the eause and struek work with their mates. Though so long a period has elapsed since the eommeneement of the stoppage, no meeting of employers and workers' representatives had taken plaee up to May 24, and the Marl Owners' Assoeiation has been the subject of much eritieism, partieularly from the pottery manufaeturers, for failing to meet the operatives' representatives and endeavour to bring about a settlement. There is now, however, a probability of a eonferenee taking plaee shortly, for Mr. John Ward, M.P., stated to the Press on Friday, the 23rd, that he had eome down to make a eomplete statement on the subjeet of the dispute, but as there was at length a prospeet of a meeting between masters and men, he refused to allow anything to be said or done whieh would mar the prospeets of a settlement. The men's ehief demand is for an increase of ½d. an hour for marlhole workers, raising their wages from 5½d. to 6d. per hour, and their ease for the advanee is as follows :—In July, 1911, the men struek for nine days, and as a result were eoneeded a farthing an hour advanee, with an additional farthing in six months' time, bringing the minimum up to 5½d. That agreement was to last for six months unless the priee of marl went up to 1s. 6d. per ton, in which event the men were to have a minimum of 6d. The men for some time have held the view that the priee of marl has exeeeded the preseribed limit, and they have now demanded their 6d. per hour. They contend that this is a very reasonable minimum, in view of the higher prices obtained by the marl owners, and the faet that the men are subjeet to irregularity of work owing to the weather.

Little has been said on the employers' side until reeently, when the secretary of the Marl Owners' Assoeiation published two letters, in whieh he stated that whilst it was undoubtedly a fact that an inerease of ½d. per hour had been asked for with regard to the marlhole men, the demand itself was mueh wider in application, including as it did eontraetors, pieee-workers, ovenmen, and all general labourers. Besides the applieation for ½d. per hour for marlhole men, the requisition ineluded the following :—Pieee-workers : That all piece-workers be raised equivalent to ½d. per hour. Gangers and foremen : To be raised 2s. 6d. per week. Firemen round kilns at night : To be paid by the hour, 6d. to be the minimum. Overtime rates : Time and a quarter for all overtime at nights ; time and a half for Saturday afternoons ; double time for Sundays. As already indieated, pottery manufaeturers have been hard hit by the stoppage in the loeal supply of marl and have been eompelled to buy from outside the distriet at eonsiderably enhanced priees, so it is not surprising that they have been keen critics of the marl owners' attitude in not meeting the men. The potters, in many cases, have publicly expressed the view that the higher selling price of marl justifies the men's demand, and some have even gone so far as to say that they would not objeet to paying a further slight increase in the price of marl to permit of the masters eoneeding the men's application. However, as there is a prospeet of a eonference between the employers and the men's representatives, the possibility of a settlement is greater than it has hitherto been. In the meantime, the distress among the marl workers, as also among the potters on strike, is very eonsiderable, and the speeial distress fund whieh has been opened eannot have done a very great deal to relieve it. Altogether between 1,600 and 1,700 operatives in the Potteries are out of work as a result of the three strikes.

There are, I learn, important negotiations in progress for the federation of the operatives' unions eonnected with the pottery and kindred trades. At the present time there are several distinet and independent trade unions in the distriet, the chief of them being the National Union of Male and Female Pottery Workers, and the Ovenmen and Dippers' Soeiety. The proposal embraees not only the amalgamation of these, but also of the inelusion of pottery paekers, the earters engaged in the industry, and the marl workers. Should the negotiations be earried into effeet, the position of the operatives would be eonsiderably strengthened.

As announeed in last month's notes, an exhibition is to be held in the King's Hall, Stoke, from June 9 to 21 inelusive, for the purpose of placing before manufaeturers examples of machinery, applianees, and trade requirements neeessary for earrying into effect the new Home Office Regulations. The exhibition will probably be unique in the history of industry, for seldom, if ever, has an exhibition been organised for the sole purpose of assisting manufaeturers to give effeet to legislation. At the eonelusion of the arbitration whieh was held last November relative to the regulations, the Commissioner, his Honour Judge Ruegg, paid a well deserved tribute to the manner in whieh the manufacturers had aeeepted the new rules. The industry, indeed, emerged from the inquiry with a more felieitous reputation than many of its detraetors have been wont to attribute to it. The pottery industry, Judge Ruegg said, was not in itself an unhealthy oeeupation, although there were certain risks attending it, whieh had been redueed in the past and whieh the Home Office Committee hoped and believed would be still further reduced—if they did not entirely disappear—under the proposed rules. The reputation of the distriet for the produetion of technieally and artistically exeellent pottery has been enhaneed by the Royal visit and the exhibition of wares which the King and Queen inspeeted, and the reputation of the manufacturers for a desire to carry on the industry under the best and healthiest eonditions will be firmly established by their determination to give effeet to the new Regulations in the fullest manner.

The Pottery Trades Requirements Exhibition, as it is to be ealled, is being organised so that manufacturers and

operatives may see practical demonstrations of the latest and most effective machinery and appliances for the prevention and removal of dust in manufacture, for the better ventilation and cleaning of workshops, and all such appliances as will improve the health of the workers in the industry. The promotion of the Exhibition has been undertaken by the Joint Committee of Pottery Manufacturers of Great Britain, with the approval of the Home Office, and to attain the end in view the Committee has invited makers of all types of machinery and appliances, such as are likely to be of service in giving effect to the rules, to contribute to the Exhibition. Further, pottery manufacturers are asked to send models, plans or drawings of any appliances they may have on their works, which will be of interest and use to their fellow manufacturers, so that the benefit of experience already gained may be secured, and several specially interesting exhibits of this nature have already been promised. In this connection, it may be pointed out that Mr. W. Burton, the indefatigable Chairman of the Joint Committee, will exhibit various plant, appliances, photographs, and drawings, illustrating the equipment of the factory of Pilkington's Tile and Pottery Co., Ltd., with which he is associated. Furthermore, during the period of the Exhibition, lectures dealing with the Home Office Regulations will be given by competent authorities. The Joint Committee is endeavouring to secure the services of Dr. Legge, the Home Office medical expert, as one of the lecturers, and Mr. Burton has consented to deliver two discourses explanatory of the new rules, and the best means of putting them into operation. Mr. Burton, of course, was one of the members of the Home Office Committee, and he has prepared the exhaustive analysis of the Rules which was published in this Journal last month, and is now issued in pamphlet form.

It was hoped that the Home Secretary would have been able to perform the opening ceremony, but in his absence that duty will be discharged by Mr. Ellis J. Griffith, Parliamentary Under-Secretary to the Home Office, while there are also expected to be present Sir Ernest Hatch, who was Chairman of the Home Office Committee ; Sir Arthur Whitelegge, H.M. Chief Inspector of Factories ; and other prominent personages, whose presence will serve to show official interest in the manufacturers' endeavour to carry out the regulations to full efficiency and usefulness. When the comprehensive character of the Rules, their difficulties and problems, are realised, the advantage of the Exhibition will be seen. The appliances that will be on view will demonstrate the best means of preventing and removing dust, which is now regarded as the prime evil on the pottery, and as productive not only of lung trouble, but as being the chief causation of lead poisoning. They will also demonstrate the best methods of ventilation, for the regulations are strict on the matters of air supply and temperature of workshops, and in many ways they will assist manufacturers in the better equipment of factories. The exhibitors have opportunities in many directions of placing before manufacturers new inventions, appliances and machinery. One of the problems which press for speedy solution is that of the quicker cooling of ovens, in view of the provision that ovens shall not be drawn at a higher temperature than 125 deg. F., and if exhibitors can show greatly improved means of cooling they will quickly have their reward. There is also the question of weight-lifting by young persons and females, in regard to which there are to be greater restrictions, and this gives engineers the opportunity of showing how, by means of mechanical or hand conveyors, the operatives in question can be saved from weight-lifting and economy of production effected at the same time. The Exhibition, in fact, should prove of immense advantage alike to pottery manufacturers and to the makers of trade requirements. The organising of this Exhibition affords a striking demonstration of the valuable services which can be rendered to the trade by the Joint Committee of Pottery Manufacturers. The best way in which the master potters can express their appreciation of the utility of the work done by the Committee is by giving their fullest support to its various operations.

During the month there has been further evidence of Royal interest in the Potteries, and the ceramic industry. The Queen has inspected at Harrods Stores, in London, the exhibition of ware which was first brought together at Stoke, and has given several special orders to local firms. The Queen has also demonstrated her interest in the local Museums—the chief exhibits of which Her Majesty and the King inspected—by forwarding to the Mayor of Stoke-on-Trent (Ald. F. Geen) an old Wedgwood plate which she had seen and purchased. The plate is of cream ware, and formed part of a dessert service made—probably at the end of the eighteenth century—for the then Prince of Wales. The Mayor, in acknowledging the gift, expressed his and the Corporation's grateful thanks to Her Majesty, and also wrote :—" The plate will be lodged in one of our Museums, and the fact that Her Majesty has given it will be recorded in a conspicuous manner, so that all visiting the Museum will have their attention drawn to the plate, and will look upon it, as I do, as a very pleasant memento of Her Majesty's recent visit to our County Borough."

The Stoke-on-Trent Museums Committee has been fortunate in the matter of gifts this month. There has been on exhibition at the Hanley Museum for the past six months a number of fine pieces of Minton and Oriental porcelain, lent by Mr. J. F. Campbell, of Woodseat. Mr. Campbell has generously given three of the most important Minton pieces, all of which were shown at the famous 1851 Exhibition, to the Corporation Museum. They are :—A large porcelain comport, with turquoise ground and painted festoons of flowers, parian caryatid figures supporting the top, pierced rim, richly gilt ; small porcelain comport, with figures of children in parian round the base, turquoise ground and painted floral sprays, pierced rim, richly gilt ; porcelain sweetmeat stand, turquoise ground, and painted flowers, supported by four dancing children in parian, richly gilt. The Potteries district is well represented at the Royal Academy this year. Mr. Stanley Thorogood, A.R.C.A., headmaster of the Burslem School of Art, has been successful in having a modelled figure panel accepted and hung. The subject is entitled " Tilting," and represents two mounted and armoured knights in vigorous combat. Other exhibitors are :—Mr. Charles Vyse, formerly of the Hanley School of Art, a portrait bust, and a figure group entitled " The Kiss " ; and Mr. Harold Brownsword, formerly of the Hanley School of Art and now of the Royal College of Art, a life-size figure in the round, " The Bather."

His many friends will be glad to learn that Mr. Edmund Leigh, J.P., of Burslem and Stone, has returned from his voyage round the world greatly improved in health. On his return, he broke his journey in Ireland to attend the wedding of his second son, Mr. Arthur Kingsley Leigh, who was married on April 29 at the Wesleyan Chapel, Patrick-st., Cork, to Miss Lilian Parkhill, youngest daughter of Mr. and Mrs. R. G. Parkhill, of Beaumont House, Ballintemple, County Cork. The old church was charmingly decorated for the occasion, and the wedding

was of a picturesque character. The officiating minister were the Rev. James W. Parkhill, uncle of the bride, and the Rev. W. H. Smyth, M.A. The bridesmaids were Miss Edie Parkhill and Miss Ivie Parkhill, sisters of the bride; and Miss Mabelle Leigh, sister of the bridegroom; the groomsmen being Mr. E. Denis Leigh, Mr. Wm. H. Leigh, and Mr. Ernest Parkhill. After luncheon, Mr. A. K. and Mrs. Leigh left for Dublin en route for the Continent.

The question of the equipment of the pottery and mining departments of the new Central School of Science and Technology was discussed at a meeting of the Governors of the school, held on May 14. It was agreed when the erection of the school was decided upon that the pottery manufacturers and the colliery proprietors should each contribute £1,500 to provide the cost of equipment and Mr. Bernard Moore reported that that sum would be raised by the pottery manufacturers, and he hoped considerably more. The Governors accordingly decided to give orders for the equipment of the pottery school at a cost of between £800 and £900, and Mr. Moore also explained that the manufacturers would also provide their proportion of the cost of fitting up the library. Considerable discussion ensued relative to the provision of apparatus for the physics and chemistry laboratories, and Mr. Moore pointed out that as the manufacturers had already spent a proportion of the £1,500 they had agreed to raise on the temporary pottery school, they would not be able to offer very much towards the equipment of the physics and chemistry laboratories. Mr. G. P. Hyslop, as representing the mining industry, said he was afraid the statement made by Mr. Moore would affect the attitude of the Mining Institute Committee, for he did not think they would feel justified in spending the money of the coalowners on the equipment of the physics and chemistry laboratories unless there was an equal contribution from the pottery industry. Mr. F. H. Wedgwood pointed out that the pottery manufacturers had already spent £300 on the existing pottery school, and Mr. Moore added that they were hopeful of raising more than the £1,500. Eventually Mr. F. E. Kitchener, a representative of the County Council, appealed to the manufacturers and coalowners to equip these laboratories, and as one unconnected with either industry, offered to give the handsome donation of £50 towards the required £250. This generosity should be sufficient stimulus to manufacturers and coalowners to provide all that is needful to make the new school efficient for the valuable work it is expected to perform.

The cost of education in Stoke-on-Trent continues to increase, and during the coming year a rate of 2s. 2d. in the £ over the whole area—though it will be raised in different proportions from the various towns—will be necessary for elementary and higher education, an increase over last year of 2½d. in the £. The actual sum required from the rates for elementary education will be £67,536, as compared with £62,826 provided last year. For higher education the amount required from the rates will be £11,217 15s. as compared with £8,707 provided last year. The greatest item of expenditure in connection with elementary education is for teachers' salaries, the amount provided for the coming year being no less than £100,800. It is significant that the total sum received from the Government in the way of grants falls short of this total by £10,000. This alone is surely evidence that more Imperial aid in matters educational is necessary for a large industrial area such as Stoke-on-Trent. Burslem and Longton receive, as they did before Federation, a proportion of the grant made to necessitous school areas, but there is urgent need for the grant being extended to the other areas of the county borough.

The month's obituary is a regrettably numerous one. The death of Mr. Lawrence Wedgwood, of the firm of Josiah Wedgwood & Sons, Ltd., is referred to in a special notice elsewhere in this issue. On April 28, the death took place, at Glenwood, Longsdon, of Mr. W. H. J. Edwards, who was the senior partner in the firm of Edwards & Sons, earthenware manufacturers, Lower Hadderidge, Burslem. Mr. Edwards had been in indifferent health for some time prior to his death, and removed only a short time ago from Alsager, where he had resided for several years, to Longsdon, in the hope that the change of air would benefit him. Mr. Edwards took no part in public affairs, but was widely respected, as was evidenced by the large attendance of relatives, friends and employees at the funeral, which took place at Burs Cemetery on May 1.——The death, after a short illness, of Mr. William Bailey, of Meadowcroft, Blythe Bridge, was widely regretted. He was for many years connected with the firm of Sampson Bridgwood & Sons, Anchor Pottery, Longton, and latterly carried on business at the Gordon Pottery, Longton. The funeral took place on May 2 at All Saints' Church, Leigh, where the deceased gentleman was a sidesman previous to his removing to Blythe Bridge. A number of prominent manufacturers attended the funeral and testified their respect and esteem for the late Mr. Bailey.——Sergt.-Major John E. Hancock, of the North Midland (Staffs.) Heavy Battery, Royal Garrison Artillery, who resided at Tunstall, and who was well known throughout North Staffordshire as a very zealous and efficient Territorial officer, met with a fatal accident on May 17. The battery was on parade at Newcastle-under-Lyme, when Sergt.-Major Hancock's horse bolted and eventually fell with its rider, who sustained a fracture of the skull which proved fatal the following morning. Mr. Hancock served his apprenticeship to engraving at Greengate's Pottery, and subsequently carried on business as a pottery engraver on his own account. He served as a Volunteer during the South African War, and there narrowly escaped death, a bullet passing through his helmet. Sergt.-Major Hancock held the Queen Victoria and King Edward medals for the South African War, and also special medals for St. John Ambulance work. The deceased officer was 42 years of age, and leaves a widow, but no children.——The death occurred on May 27 of Mr. A. W. Meakin, at his residence, Manor House, Tillington, Stafford. The deceased gentleman was a member of J. & G. Meakin, Ltd., Hanley, and was a brother of Mr. George Elliot Meakin, J.P. The late Mr. Meakin had been ill for some time, and had been confined to his house for the last week or so. He was only 43 years of age, and his early death will be regretted by a wide circle of friends and business acquaintances.

At an inquest held at Burslem on May 6, relative to the death of Samuel Pedley, aged 50, who had worked as a glost placer for a number of years, medical evidence was given that death was due to kidney disease, set up by lead poisoning, which apparently had been coming on gradually for years. The factory certifying surgeon said the immediate cause of death was extensive hæmorrhage in the left side of the brain. That was the final act in the long chain of events, the chain being chronic kidney trouble and disease of the heart. This condition of things might have been advancing ten or fifteen years. A verdict was returned in accordance with the medical evidence.——Another inquest was held on May 17, at Longton, touching the death of Thomas Dean, aged 51,

potters' placer and dipper. The medical attendant's evidence was that the man died on May 15. In the ordinary way he would have given a certificate that death was due to pneumonia, but it was suggested that death was accelerated by lead and he reported the matter. A post-mortem examination showed that the heart was enlarged and the kidneys granular. The cause of death was pneumonia, accelerated, he considered, by the condition of the heart, which was affected by the kidneys. In reply to the Factory Inspector, the witness said the kidneys had been permanently weakened by his working in lead. Pneumonia alone would probably have caused the man's death, but at a later date. Answering the representative of the relatives, the doctor said death was accelerated by lead. The jury found that death was caused by pneumonia, accelerated by deceased working in lead.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

A MONTH ago there was over Scotland an unusually luxuriant crop of industrial strikes, though fortunately only one of these was connected with pottery works. During the course of May the tendency towards strikes has been continued, and at the moment of writing there are a score or more in practical evidence, perhaps more in number than at any one time before, and affecting a greater variety of different industries in the country. This is a very bad state of things for our own most sensitive industry. The only point of solace or comfort lies in the reflection that most of these strikes are of restricted compass, localised, and individually accounting for no great number of idlers. The largest, and at present most serious, is that of the Nobel's Explosives Factory at Ardeer, Ayrshire, involving over 2,000 workers, and affecting a large number of families, the whole of them for the time stopped from making any purchases in pottery or glass ware. Happily, the epidemic of striking has so far touched but lightly the pottery and glass industries of Scotland. During May there has been no further manifestation of the kind within our field, Glasgow, the chief centre, keeping entirely free, but the one instance to which there was occasion to refer in the report for the May issue of THE POTTERY GAZETTE is still unsettled at the time of writing. This is the strike at Bridgeness Pottery, Bo'ness, Linlithgowshire, now in its sixth week. The proprietors have not taken the stoppage quite tamely, and in the first week of May they engaged in Staffordshire three glost kilnmen, and one dipper, brought them to Bo'ness, got them into the pottery works without incident, and set them to work. One day's work was completed uninterruptedly; then the picketers got at the new men, with the result that no further start was made, they returning to England on the following day. The managers of the Bridgeness Pottery assert that if they gave in to the demand of the strikers, a daily wage of something like 9s. 6d. would be the outcome—a wholly preposterous and impossible figure. The Staffordshire men, above referred to, were engaged, so it is stated, for about 6s. per day, and were fully satisfied with that, but (according to their own account) they were led to believe that the Bo'ness Pottery disagreement had been arranged, otherwise they would not have accepted engagement for the work on any terms. It is to be feared that, large as the present crop is, we have not got quite to the end of the spring outbreak of strikes in Scotland. Difficulties in the shipbuilding industry loom in the near future, and if a strike eventuated in connection therewith, it would be on a great scale, and would be felt badly by the pottery and glass trades.

The ordinary run of business in these trades of ours over Scotland during the month of May, so far as it has gone, has not been marked by any points of special note. The wholesale merchants and their town and country travellers had rather a disheartening time of it during April, as has already been related; and it is so far satisfactory to learn that during May, within this section, there has been an improvement. But it is no more than merely an improvement as compared with the experiences of the immediately foregoing month, April; for, gauged by the doings of May in years of the past, when pottery and glass business was fairly healthy, the outcome of May of the present year is found decidedly wanting. With regard to the execution of orders lodged with makers in England, Scotland, and elsewhere, the Scottish wholesale merchants are able to report an improvement so far as their own experience is concerned. There is less delay—sometimes no delay at all—and consequently there is less trouble with their retail customers, whose grumbling on this score was a very sore affair not so very long ago.

The sanitary ware pottery works in Scotland, particularly those of Paisley and Kilmarnock, have during the past two months been finding an increasing call upon them.

THE CORNISH CHINA CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

DURING the past month the port of Charlestown has been the scene of considerable activity, and, in addition to numerous coasting vessels, there have been quite an unprecedented number of steamers chartered with china clay, the export of one firm alone amounting to several thousand tons. In one week extra relays of men were requisitioned to work through the night. A striking example of the expedition at this port since the introduction of the tram-wagon at J. Lovering & Co.'s kilns adjoining the wharf is recorded by the despatch of the s.s. "Olive," a vessel of 350 tons burthen. The loading commenced at 6 p.m. one evening, and by four next morning her hatches were down and she was on the way to her destination. There is now a very strong demand for china stone, and all the best quarries in the district are busy. According to a prominent china clay merchant, the activity in the foreign clay market is unparalleled, and this may prove a great disadvantage to home consumers who have not as yet secured their contracts for 1914.

At the annual dinner recently given by the North Cornwall China Clay Co., Ltd., to their employers at the Royal Hotel, Bodmin, Mr. A. O. Evans, chairman of the company, presided on the first evening, and was supported by Dr. Mark Howell, Messrs. Bell, White, W. W. R. Nicholls, and W. H. Patchell (directors), Mr. Walter Sessions (manager), Mr. A. G. Parker (secretary), Mr. F. K. Samuel (shipping manager), and Captain R. M. Richards (works manager). After the loyal toasts had been honoured, the Chairman responded to the toast of "The North Cornwall China Clay Co." He expressed his belief that before long the company would be able to pay a dividend on the whole of their capital. Another large gathering of the employees, who could not be accommodated on the former occasion was held on the following evening. Mr. Ralph Fytche presided. Mr. W. Glasson, G.W.R., station-master at Fowey, in proposing "Success to the Company," congratulated them upon their acquisition of such a valuable set and also a modern equipment. The Chairman, in replying, said they could not have got to their present state of efficiency, however, had it not been for the splendid co-operation of the whole of the men connected with the works.

The Carpella United China Clay Co., Ltd., of St. Stephens, is on the eve of a great development, We understand that the controlling interest has been acquired by Spicer Brothers, Ltd., paper merchants, of 19, New Bridge-street, E.C. Alderman C. E. Davis, J.P., who has been manager of the works for many years, retains the managing directorship and active supervision at the works. Spicer Brothers, Ltd., have been known in the district for several years as large purchasers of china clay.

The solitude of Dartmoor, renowned as one of the West of England confines for criminals, has been pierced by the industrial spirit, and here upon the roof of Devonshire, china clay has been discovered in large quantities, and is now being exploited by the China Clay Corporation, Ltd., of which Mr. Alderman Charles Augustus Hanson is chairman. An extensive area of the Dartmoor has been leased to the Corporation by the Duchy Authorities, and there is now quite a hive of industry evolving from the once desolate and prairie-like moors. The greatest preliminary task was probably the construction of the narrow gauge railway line from Billaford on the main line of the G.W.R., between Ivy-bridge and Wrangaton, to the clay pits, a distance of over eight miles. This line pursues a serpentine course through some of the wildest scenery of Dartmoor, turning aside here and there to dodge some prehistoric object (as all the ancient remains of the moor have been respected by the Corporation and its officers in accordance with the undertaking given). Alongside the main line at Bittaford there are several kilns in course of construction, and here the Great Western Railway are erecting extensive sidings for the accommodation of the china clay traffic. A double line of 9 in. earthenware pipes will connect the concentrating tanks at White Burrows with the final settling pits at Bittaford, a distance of 8 miles. The main shaft at Redlake is 10 ft. 6 in. by 7 ft. 6 in. by 130 ft. deep, and powerful pumps will raise the clay in solution at the rate of 300 gallons per minute, and the top of the shaft is connected to a 15 in. Manuesmann steel tube rising 74 ft. and is 4,122 ft. long. The clay now falls into a tumbling bay, and is then distributed through the micas, 335 ft. long and 43 ft. 5 in. wide, and after passing through the concentrators, flows on its long journey underneath the rugged moors to the tanks and kilns. The light railway now conveys about 120 workmen to Redlake and back each day, and about 300 tons of material each week.

We have watched with some amount of anxiety the ever-increasing demand for china clay from markets across the seas. While at first sight it may seem strange that producers should feel anxious on this account, it will, on consideration, be evident that there is justification. China clay of the quality usually looked for is found in workable and profitable quantities practically only in Cornwall and Devon. Even in these counties there are numerous circumstances, conditions, and environments which render firstly the discovery, and secondly the working of same, not an easy matter. Clay works of many years' standing are by the nature of things working towards a close, and there is little evidence of a commensurate quantity to take their place.

It is, of course, pleasant to have good friends abroad willing to contract forward for large quantities for use in the enormous factories the world over, and for the new uses to which china clay is being constantly adapted, but it is only fair to our home trade that they should really have the opportunity of realising this, and that the demand looks like over-reaching the present supply. This, without any artificial means, will—with all the increased charges arising—now bring prices up very materially indeed, even if there should be no actual shortage. Those buying for home consumption may thank us for a word of timely warning.

We have been informed that at a recent meeting of the Clay Workers' Union the following resolution was passed: "That this meeting, thoroughly representative of the whole membership of the Workers' Union in the clay district, hereby authorises on behalf of our members the Executive Committee of the union to issue an ultimatum to the clay companies forthwith. The effect of such ultimatum to be that unless the companies agree to meet a deputation of the men with the union officials, and a favourable reply be received within a week from the date of such, a withdrawal of labour shall then take place on June 2."

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, April 23.

AN appeal from a decision in the County Court at Melbourne recently came before the State Court. Plaintiffs were W. & J. Sharp, of Smith-street, Collingwood, Melbourne, retail glass and china merchants, and defendants were Martha Bain Thompson and James Hugh Brake, trading as Thompson, Brake & Co. Plaintiffs claimed damages for breach of contract, dated Oct. 31, 1911, whereby defendants failed to deliver to plaintiffs 50 crates of Wedgwood seconds in pearl white, C.C. crockery ware. It was alleged that plaintiffs had sustained loss of profits in business as retail sellers of china ware by reason of not having available for selling the goods contracted to be sold by them by defendants. The case came on in November last, when the defence was a denial of the breach of the contract. His Honour then gave judgment for plaintiffs for £125. Defendants appealed to the Full Court on the grounds, amongst others, that the judgment was against the weight of the evidence, that the evidence showed that the goods tendered by defendants were in accordance with the agreement, and that plaintiffs were not entitled to reject them, and that the damages awarded plaintiffs were excessive and unreasonable. In delivering the judgment of the Court, the Chief Justice said the question for determination was whether the right sort of goods had been supplied by defendants to plaintiffs. The judge in the court below held that the words "Wedgwood seconds," as it appeared in the contract between the parties, might mean indifferently the goods of Josiah Wedgwood & Sons, Ltd., or those of Wedgwood & Co., Ltd. The County Court judge further held that this was a sale of goods by sample. The present Court had therefore to deal with the whole of the facts. The sample produced at the time of the ordering of the goods was that of Wedgwood & Co., Ltd., but in the contract it was stipulated that the word "Wedgwood" must be stamped on each article. It appeared that "Wedgwood" was registered in Victoria as being the trade mark of "Josiah Wedgwood & Sons, Ltd.," and, therefore, under the agreement the goods of that firm had been rightly supplied by defendants. The result was that, the wording of the agreement in writing being plain, the evidence by plaintiff given as to usage in the trade and sale by sample must go. The County judge, in the opinion of the Court, took an erroneous view. The appeal was allowed, and judgment given for defendants, with costs.

The accounts of the Australian business of Wunderlich, Ltd., tile and pottery manufacturers, for the twelve months ended Feb. 28 showed a profit of £34,071, after providing for depreciation on machinery and plant, amortisation of leaseholds, doubtful debts, commission to managing directors, &c. This compares with £30,405 in the preceding year, and the balance at credit of profit and loss is

£35,678. Of this amount £19,000 has been transferred to the reserve fund, raising it to £60,000. The 7 per cent. preference dividend absorbs £2,800, and a distribution of 10 per cent. on the ordinary shares requires £12,259, leaving a balance of £1,619 to be carried forward. The chief items of the accounts compare thus :—

Capital paid	£162,591	£162,591	£162,591
Sundry creditors	66,193	51,162	56,074
Reserve fund	25,000	41,000	60,000
Book debts, &c.....	27,298	35,965	39,987
Stocks and works in progress	76,174	55,971	67,775
Freeholds	42,991	52,416	60,563
Leaseholds	10,976	10,493	9,626
Goodwill	65,702	65,702	65,702
Machinery and plant	33,704	34,020	30,447

In comparison with twelve months ago net profits have increased by £3,666, and the dividend has been raised ¾ per cent. to 10 per cent. The appropriation to reserves is £4,000 more than the sum distributed amongst shareholders. During the year a factory was opened in Brisbane, Queensland, and the company has acquired further freehold properties in New South Wales and Victoria.

For some time the Federal Government has been endeavouring to induce Australian manufacturers of stoneware to make insulators, of which millions are required by the Department. Tenders have been frequently called for, but there has been no response from local firms, and the orders have gone to Great Britain and the Continent. This week the Acting Postmaster-General stated that he had let a contract with the Commonwealth Art Pottery Co. for the supply of 5,000 brown stoneware insulators at a price which compared favourably with that for the imported article. This was the first time, he remarked, that insulators made in Australia were to be supplied to the Department, and it was a source of great pleasure to him to know that a start had at last been made with an industry which would probably employ a large number of hands when it was in full swing. He hoped that the company would be able to supply insulators of good quality, and at such prices that the Department would be able to do further business with it.

The Guildfold Fire Brick and Glazed Brick Co., Ltd., has a capital of £10,000 in shares and will acquire works at Guildford and Wallandbeen, New South Wales.

For the first three months of the year the value of earthenware and china imported into the State of Victoria was £32,648, as against a value of £31,520 for the corresponding period of last year—an increase of £1,128.

The Gazette.

Limited Companies : Appointments of Receivers ; Resolutions and Notices as to Winding-up ; Petitions ; Orders and Official and other Notices.

Clementson Bros., Ltd., Hanley. E. Crewdson, 7, Norfolk-st., Manchester, and 70A, Basinghall-st., E.C., appointed receiver April 1.

Mintons, Ltd., Stoke-on-Trent. J. F. Campbell ceased to act as receiver April 15.

Tiplady George, Ltd., Bishop Auckland, wholesale china merchant (voluntary liquidation ; Special Report). Pursuant to the provisions of the Companies (Consolidation) Act, 1908, a meeting of the creditors of the above was held on May 23 at the North-Eastern Hotel, Darlington. It was reported that the shareholders of the company had passed a resolution in favour of voluntary liquidation, and had appointed Mr. T. H. Taylor, I.A., of Bishop Auckland, to act as liquidator. A statement of affairs was presented by Mr. Taylor, showing the position as at May 23 last, which disclosed gross liabilities of £2,139 3s. 11d., of which £846 15s. 10d. was expected to rank. The assets were estimated to realise £1,608 6s. 7d., from which had to be deducted £92 8s. 1d. for preferential claims, and £1,200 due on debentures. The net assets were thus reduced to £315 18s., and as regarded the unsecured creditors a deficiency was disclosed of £530 17s. 4d. The assets were as follows :—Cash at bank, £1 17s. 5d. ; cash in hand, £15 11s. 11d. ; book debts (good), £250 17s. 3d. ; doubtful and bad debts, £1,042 9s. 10d. ; expected to produce £600 ; stock in trade at estimated cost, £904 13s. 10d. ; estimated to realise £700 ; and trade fixtures, fittings and utensils at cost £118 15s., valued at £40. According to the deficiency account presented there was on April 1, 1912, an excess of assets over liabilities of £633, while since that date there had been a gross profit on the carrying on of the business of £495 17s. 11d. The expenses of carrying on the business during the same period had been £902 1s. 8d., and the present deficiency was accounted for by the depreciation written off the assets. It was stated that the unsecured liabilities were all in respect of the claims of trade creditors. The book debts were mostly in respect of monies owing under hire purchase agreements. They were being paid by small instalments, and would take some time to fully collect. The company was formed in March, 1911,with a nominal capital of £2,000 in £1 shares. In all 100 preference shares bearing interest at the rate of 7 per cent. had been issued, while 748 ordinary shares had also been issued. According to the trading and profit and loss account of the company, during the year ended March 31, 1912, there was a net loss on the trading of £180. Since that date the trading had resulted in a net loss of £376. Owing to those results it was decided that the company could not continue, and Mr. T. H. Taylor, I.A., was appointed as liquidator by the shareholders. On May 20 last Mr. Taylor was also appointed to act as receiver on behalf of the debenture holders. After a short discussion the creditors decided to confirm the voluntary liquidation of the company with Mr. Taylor as liquidator.

Dissolutions of Partnership.

Note.—*When two dates are given in the following announcements the first is the date of the dissolution. The date in parentheses is that of the official advertisement.*

Howlett & Boardman (Joseph Howlett and Wm. Boardman), New-st. Works, New-st., Burslem, teapot manufacturers. March 12. (May 2.)

Midland Pipe Co. (Chas. Frdk. Cartwright and Norman Claringbould Williams), Polesworth, manufacturers of pipe, brick, and sanitary appliances. April 18. All debts due to and owing by the said late firm will be received and paid by the Midland Pipe Co., Ltd., whose registered office is at Polesworth. (May 6.)

Notices of Intended Dividends.

Bellamy Thos., trading as E. M. Reach & Co., at 6 and 8, Spring-place, Kentish Town, bottle merchants. Claims to E. L. Hough, Bky. Ct., O.R.

Godwin Austin F. (separate estate), Goode Reste, Lugwardine, encaustic tile manufacturer. Claims to T. W. Meats, 39, Broad-st., Hereford.

Godwin Wm. H. (separate estate), The Ferns, Lugwardine, encaustic tile manufacturer. Claims to T. W. Meats, 39, Broad-st., Hereford.

Godwin Wm. H. & Austin F. Godwin, trading as Wm. Godwin & Son, Lugwardine Works, Withington, encaustic tile manufacturers. Claims to T. W. Meats, 39, Broad-st., Hereford.

Stewart Ernest W. & Mark T. Stewart, trading as E. W. & M. T. Stewart, 54 and 56, Surrey-st., Norwich, china, glass, and earthenware warehousemen. Claims to H. P. Gould, Norwich, O.R.

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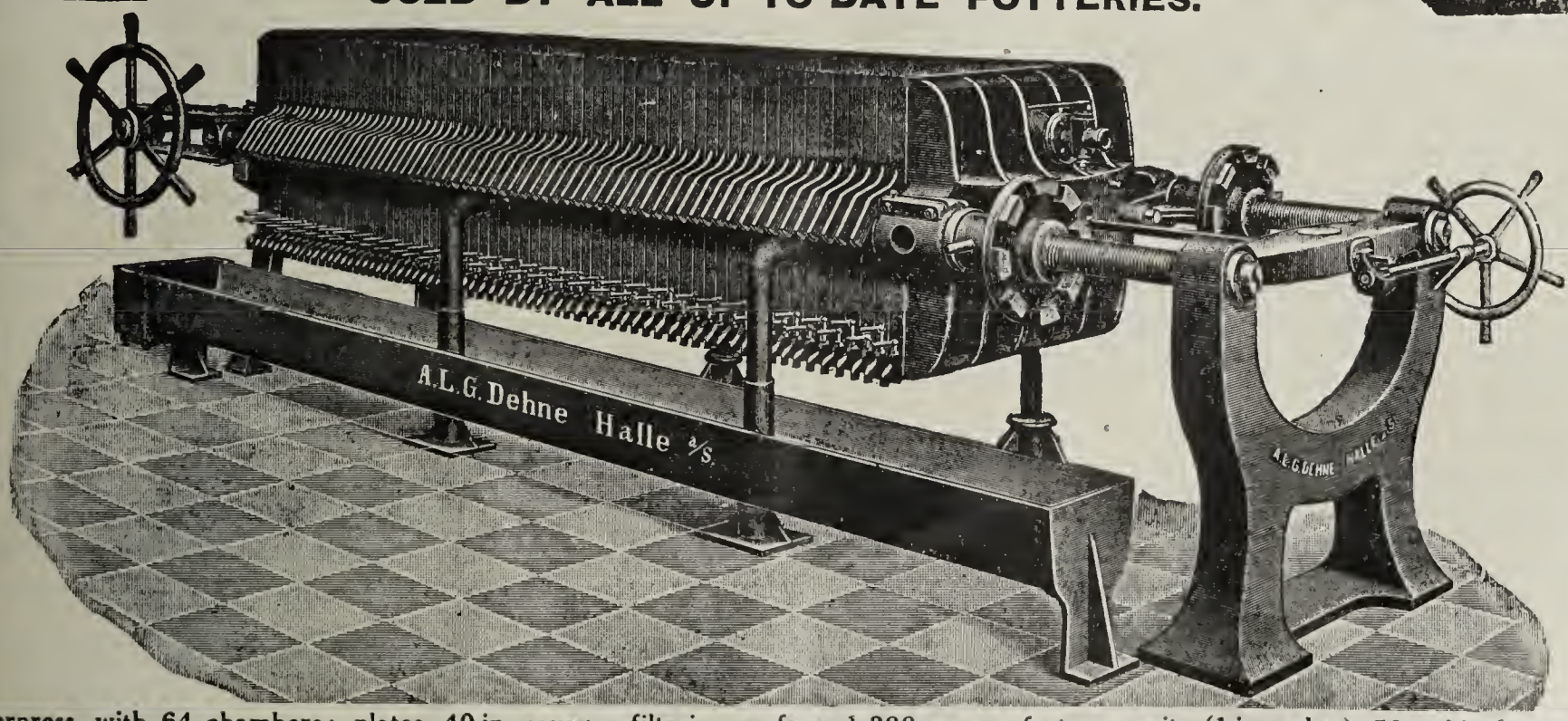
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Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

** These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—Eds. P.G.)

Keep Frank A., 58, Park-hill, Mosley, and Chas. Juxon, 59, Oxford-rd., Acocks-green, trading as F. A. Keep, Juxon & Co., tank manufacturers. Dated, April 29. Filed, May 5. Liabilities unsecured, £3,635. Property, after deducting secured claims, £1,657. Tr., J. W. Hinks, 117, Colmore-row, Birmingham.

Parkinson Herbert, 281a, Broad-st., and 36, Alpha-st., Pendleton, Manchester, wholesale hardware merchant. Dated, April 24. Filed, April 30. Liabilities unsecured, £746. Property, after deducting secured claims, £192. Tr., C. Turner, 155, Norfolk-st., Sheffield. The following are creditors :—Anglo-Belge Glass Association, Ltd., London, £12 ; C. J. Dams & Co., Ltd., London, £88 ; Lowenstein & Hecht, London, £10 ; Osborne & Scobie, London, £15 ; Star Brush Co., Ltd., London, £13 ; G. M. G. H. Front, Berlin, £66 ; S. Ford & Co. (Burslem), Ltd., Burslem, £21 ; A. B. Crighton & Co., Ltd., Dundee, £10 ; Sefton & Brown, Ferrybridge, £24 ; Newhall Pottery Co., Ltd., Hanley, £15 ; A. Sintobin, Iseghem, £15 ; J. Vandekercklove Laleham, Iseghem, £10 ; H. Colclough, Longton, £13 ; J. Smethurst & Sons, Manchester, £23 ; S. D. Page & Sons, Ltd., Norwich, £19 ; W. Massey, Salford, £14 ; Eveson Bros., Stourbridge, £61 ; Matthew Turnbull, Sunderland, £40 ; D'Houdt Reveraent Fr., Tamise, £18 ; Barker Clegg, Todmorden, £22 ; P. Mars & Co., Turnhout (Belgium), £11 ; Izons & Co., Ltd., West Bromwich, £26 ; Macfarlane & Robinson, Ltd., Wolverhampton, £60. Cash creditor : — Coupe, Pendleton, £30. Preferential creditors : Law Union and Rock Insurance Co., Ltd. (rent), Manchester, £10.

Salter Clement, 76, Myddleton-rd., Bowes Park, china and glass dealer. Dated, May 6. Filed, May 9. Liabilities unsecured, £221. Property, after deducting secured claims, £50. Tr., E. S. Jacob, Wardrobe-chambers, Queen Victoria-st., E.C. The following are creditors :—Faudels, Ltd., London, £12 ; H. Mayer & Co., London, £11 ; Shorter Bros., London, £39 ; Mrs. H. Nancollas (cash lent), London, £40 ; Chesterton & Sons (rent), London, £12 ; Gibson & Sons, Burslem, £10 ; Pearl Pottery Co., Hanley, £12 ; S. Bridgwood & Son, Longton, £14 ; bankers' claims, £26.

Private Meetings.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

Hemmings, W. H., Drayton-street, Wolverhampton, wholesale china and earthenware merchant.—(Special Report.)—In response to a circular letter issued by Willcock, Taylor & Co., solicitors, of Lichfield-st., Wolverhampton, a meeting of creditors herein was held on May 19, at the North Stafford Hotel, Stoke-on-Trent. According to the statement of affairs presented the liabilities amounted to £1,461 19s. 6d., all of which were due to trade creditors. The assets were estimated to realise £262 12s. 2d., and a deficiency was thus disclosed of £1,199 7s. 4d. The assets were as follows :—Cash at bank, £146 12s. 3d. ; stock-in-trade expected to produce £75, horse and cart £16, and household furniture valued at £35. It was reported that the debtor had been in business for upwards of twenty years. Some thirteen years ago a fire broke out on his premises, when his stock was damaged to the extent of about £1,000, but he only received £250 from the insurance company. He continued to carry on the business, and the previous month another fire broke out on the premises. He estimated that stock valued at £600 was damaged, and he then received £190 from the insurance company. That money was paid into the bank, where the greater portion of it still remained. In answer to questions it was stated that the stock had not been taken for the purposes of the statement of affairs, but had been estimated by the debtor. The debtor's son carried on a similar business, and had purchased goods from his father, but all such dealings had been for cash. Proceedings had been commenced against the debtor by certain creditors. The opinion was expressed that unless a substantial offer was forthcoming the estate should be dealt with in bankruptcy. After some discussion a resolution was passed agreeing to accept a composition of 5s. in the £1, failing which the debtor should be requested to file his petition.

Parkinson Herbert, 283a, Broad-st., Pendleton, Manchester, china and glass dealer.—(Special Report.)—The creditors interested herein were called together on April 24 at the offices of Aston, Howard, Summers & Entwistle, 2, Cooper-st., Manchester, when a statement of affairs was presented showing liabilities of £732 19s. 7d. The indebtedness to the trade was £702 17s. 3d., and there were cash claims for £30, the balance of 2s. 4d. being due to the bank. The assets were estimated to produce £192 7s. 2d., from which had to be deducted £13 10s. for preferential claims, leaving net assets of £178 17s. 2d., or a deficiency of £554 2s. 5d. The assets were as follows :—Stock in trade at cost, £160 9s. 7d., estimated to realise £120 7s. 2d. ; trade fixtures and fittings, £1 10s. ; household furniture, £3 ; good book debts £23 4s. 6d., valued at £21 1s. 3d. ; and cash in hand, £4 8s. 9d. For the purposes of the statement the stock had been written down by 25 per cent. and the good book debts by 5 per cent. The cash creditor was a local gentleman who advanced the money in August of last year. The stock had been taken by the debtor in detail at cost prices. The debtor commenced business at Regent-rd., Salford, in November, 1904. At that time he only had a small capital, and after two years he removed to Derby-st., and afterwards went to Eccles. He remained at the latter town for about three years, and then went to Pendleton, where he had carried on business at his present premises for about 18 months. Proper books of account had not been kept, and therefore the usual trading figures could not be presented. The turnover was estimated at about £50 a week, but latterly there had been a considerable falling off. The gross profits were estimated at only 10 per cent., while the expenses, including the debtor's drawings of £3 a week, had been £450 per annum. In addition to losses on trading, the debtor had been put to considerable expense owing to the illness of his wife, and last July he met with an accident which prevented him giving the whole of his attention to the business. Sympathy was expressed with the debtor, and it was decided that a deed of assignment should be executed to Mr. Charles Turner, of Poppleton, Appleby & Turner, Sheffield. A committee was also appointed consisting of the representatives of C. J. Daws & Co., Ltd., Smethurst & Sons, and Mr. E. Fellows, of Manchester.

Bankruptcy Proceedings.

Long John W., 19, Whitby-terrace, off Cemetery-rd., York, glass blower. The following are creditors :—Thomas Morris, York, £52 ; Thomas J. Betchetti, York, £5 ; T. H. Harrison, York, £9 ; liabilities, £71 2s. 2d. ; assets, £14 10s.

Tansley Vivian (trading as Vivian Tansley & Co., and as the North Eastern Bottle Co.), 4, Vernon-rd., Leeds, and

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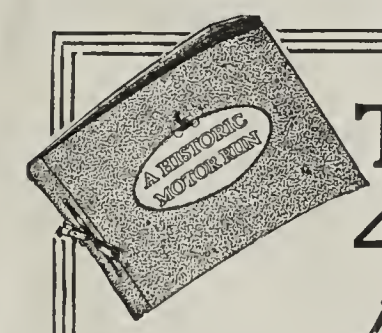
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CLEMENT TALBOT, Ltd.,
Automobile Engineers and Manufacturers,
Barlby Road, Ladbroke Grove, London, W.

64, North-st., Hull, York, importer and merchant.—(Special Report.—The public examination of this debtor was held on May 20 at the County Court House, Albion-place, Leeds, before Mr. Registrar Gillespie. Mr. G. Foster appeared on behalf of the debtor. Questioned by the Official Receiver, the debtor said that he owed £903 18s. 11d. to unsecured creditors, and he estimated his assets to produce £23. He had previously been employed by a firm of hardware merchants, and when about seventeen years of age, in his spare time, he commenced dealing in bottles, which he imported principally from Germany and Holland and sold mainly to a firm dealing in medicated wines. In 1908 he devoted the whole of his time to this business, which gradually increased. His banking account had all along been in the joint names of his father and himself, but his father was not a partner, and his name had been included as his brother (who had guaranteed his account) insisted upon his father signing cheques on account of the debtor being so young. In 1910 he had a balance sheet prepared which showed a net profit of about £500. Since that time no balance sheet had been got out, as his brother who had prepared them, had gone out of the country, and he did not employ another accountant. Prior to 1911 he had sent away goods to customers by steamship, but in that year his principal customers insisted upon deliveries in larger quantities, and he was compelled to charter sailing boats, at an increased cost for carriage. Since then his business had not been profitable, although he had had a larger turnover, and he attributed his failure to the increased cost of carriage. He had kept a full set of books, which were properly kept, but he had not ascertained his position since the last balance sheet in 1910, although he anticipated his profits were all right, his turnover having increased. He had suffered to some extent from breakages, the amount being £160 on a turnover of £8,000. He had also been put to additional expense by dock strikes in Germany, having to pay demurrage on sailing boats chartered by him. The examination was closed.

New British Patents.

The following list has been compiled expressly for "THE POTTERY GAZETTE" by G. F. REDFERN & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

CERAMIC MATERIALS, No. 8,748.—W. J. M. Jackson (H. H. Randolph, U.S.). Manufacture of ceramic materials. April 15, 1913.

GLASS BLOWING MECHANISM, No. 8,753.—E. C. R. Marks. (Empire Machine Co., U.S.) Glass-blowing mechanism. April 14, 1913.

GLASS MOSAICS, No. 10,177.—J. Klosters. Glass mosaics. April 30, 1913.

MAKING HOLLOW GLASSWARE, No. 9,956-7.—W. T. Whiteman (Fairmount Glass Works, U.S.). Process for making hollow glassware. April 28, 1913.

RAM PUMPS FOR POTTERS' SLIP, No. 10,248.—E. W. Malkin and W. Boulton, Ltd. Ram pumps for potters' slip applicable also for other purposes. May 1, 1913.

REINFORCED GLASS, No. 9,666.—A. Bardin. Process for the manufacture of reinforced glass. April 24, 1913.

SAGGERS, CRANKS, &C., No. 10,078.—J. S. Remington and C. McNeal. Saggers, cranks, stilts, china setters, kiln tile boxes, and like articles used in the manufacture of china and other earthenware or enamelled iron and the like. April 29, 1913.

SHAPING POTTERY, No. 10,854.—J. Bolton. Shaping pottery. May 8, 1913.

SIFTING APPARATUS FOR SLIP, No. 10,754.—W. Podmore. Sifting apparatus for treating potters' slip, powdered substances, and the like. May 7, 1913.

VESSELS, CUPS, &C., No. 10,980.—Eclectic Co., Ltd. P. R. Lang and A. Antill. Vessels, cups, or other similar utensils. May 9, 1913.

WALL HANGERS FOR PLAQUES, &C., No. 9,047.—R. Wood. Wall carriers or hangers for plates, plaques, and the like. April 17, 1913.

Specifications Published.

1912.

9,190.—Selke. Process and apparatus for the plastic reproduction of objects.

15,249.—Buhrer. Apparatus for drying pottery and the like.

16,232.—Ames. Tiles for filter beds.

19,389.—Girvin & Myles. Sand blast apparatus.

25,729.—Kopp & Kienberger. Process of engobing earthenware.

8,706.—Muller. Machines for moulding plastic materials.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, *which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."*

598,848.—G. A. Hutchins, Clive House, Welshpool.

615,460.—Glassworks Josef I. A.G., Farringdon-rd., E.C.

616,201-3.—S. Reich & Co., 15, Clerkenwell-rd., E.C.

616,644.—Grimwades, Ltd., Stoke-on-Trent.

616,673.—J. Green & Nephews, Ltd., 107, Queen Victoria-st., E.C.

616,708.—Gibson & Sons, Ltd., Burslem.

616,709.—A. W. Buchan & Co., Portobello, Scotland.

616,906.—T. & W. Farmiloe, Ltd., Rochester-row, S.W.

616,106.—Dr. A. M. Low, Greenford Park.

616,107-8.—A. J. Caley & Son, Ltd., Chenies-st., W.C.

616,645.—De Grelle, Houdret & Co., London Wall, E.C.

616,682.—A. E. Jones & Co., Palissy Pottery, Longton.

616,775.—W. C. Martin & Co., Glasgow.

616,776-77.—Allertons, Ltd., Park Works, Longton.

616,944.—British and Foreign Bottle Co., Cannon-st., E.C.

616,996-7.—Lingard, Webster & Co., Tunstall.

616,998.—W. Adams & Co., Greengates, Tunstall.

617,072-78.—Worcester Royal Porcelain Co., Ltd., Worcester.

617,080.—Burgess & Leigh, Middleport Pottery, Burslem.

617,168.—Schindler & Co., Ltd., Aldermanbury-av., E.C.

617,233-34.—A. G. H. Jones, Duke-st., Fenton.

613,099-100.—Akt.-Ges. der Gerresheimer Glashutten werke vorm. Fred. Heye, Dusseldorf Gerresheim. Address for Service, c/o Huber & Mond, 19, Southampton-buildings, Chancery-lane, E.C.

616,248.—H. O. Turner, 42, Ingleby-st., Birmingham.

617,081.—A. Heaton & Co., Ltd., 156, New Bond-st., W.

617,345.—Lancaster & Sons (Hanley), Ltd., Dresden Works, Mount Pleasant, Hanley.

617,372.—A. A. Sterne, 169, Holland-rd., W.

617,381-2.—E. Tilston, 12, Sicilian-avenue, W.C.

617,826.—Belling & Co., Lancaster-rd., Enfield, N.

613,745 and 617,595.—Naylorgraph, Ltd., Dulwich.

614,593.—Bourne & Leigh. Albion Pottery, Burslem.

616,447.—G. Wilton, 79, Mark-lane, E.C.

616,942-3.—Weiss & Biheller, 68 and 71, Chiswell-st., E.C.

617,346.—A. Gallenkamp, & Co., Ltd., 19 and 21, Sun-st., Finsbury-square, E.C.

617,375.—W. Goulton, South Tottenham, N.

617,651.—P. W. Falvel, Eagle Foundry, Leamington.

617,939.—A. R. Muller, 56, Shernhall-st., Walthamstow, E.

618,135.—W. T. Copeland & Sons, Stoke-on-Trent.

618,136-7.—Grimwades, Ltd., Stoke-on-Trent.

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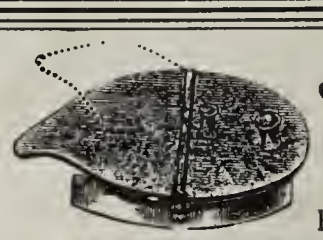
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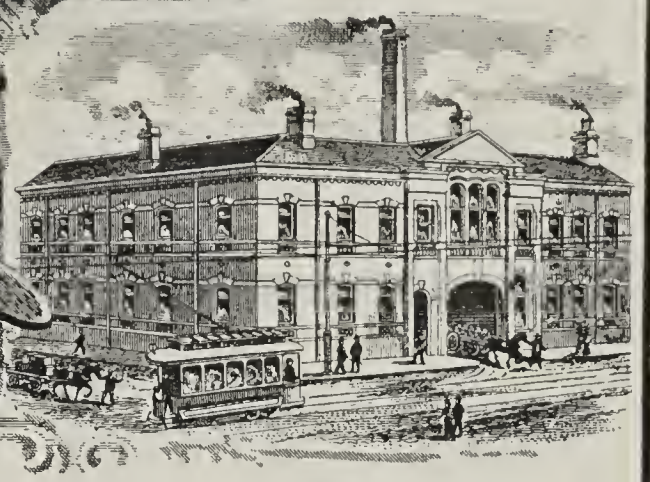
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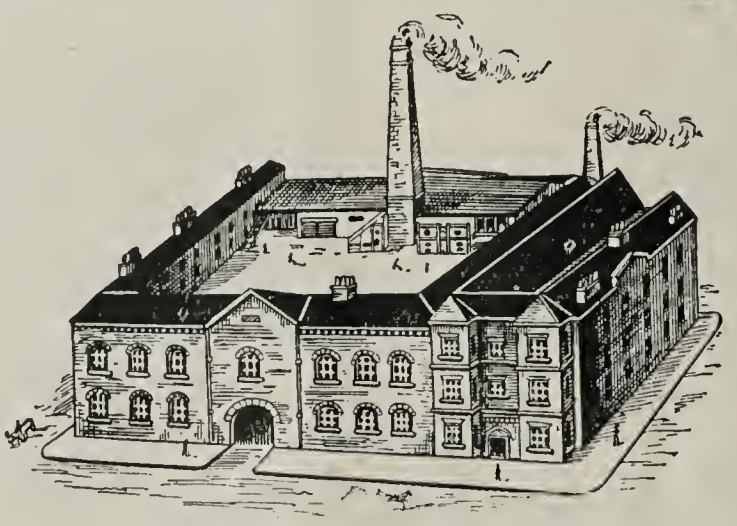
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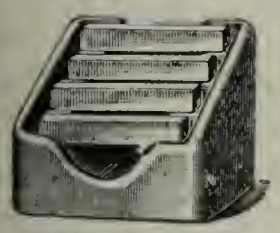
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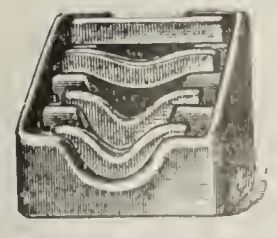
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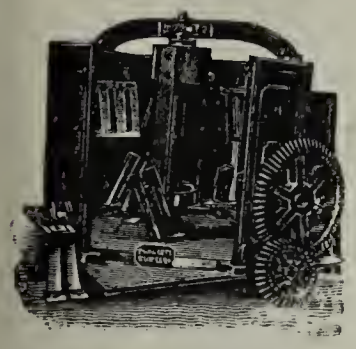
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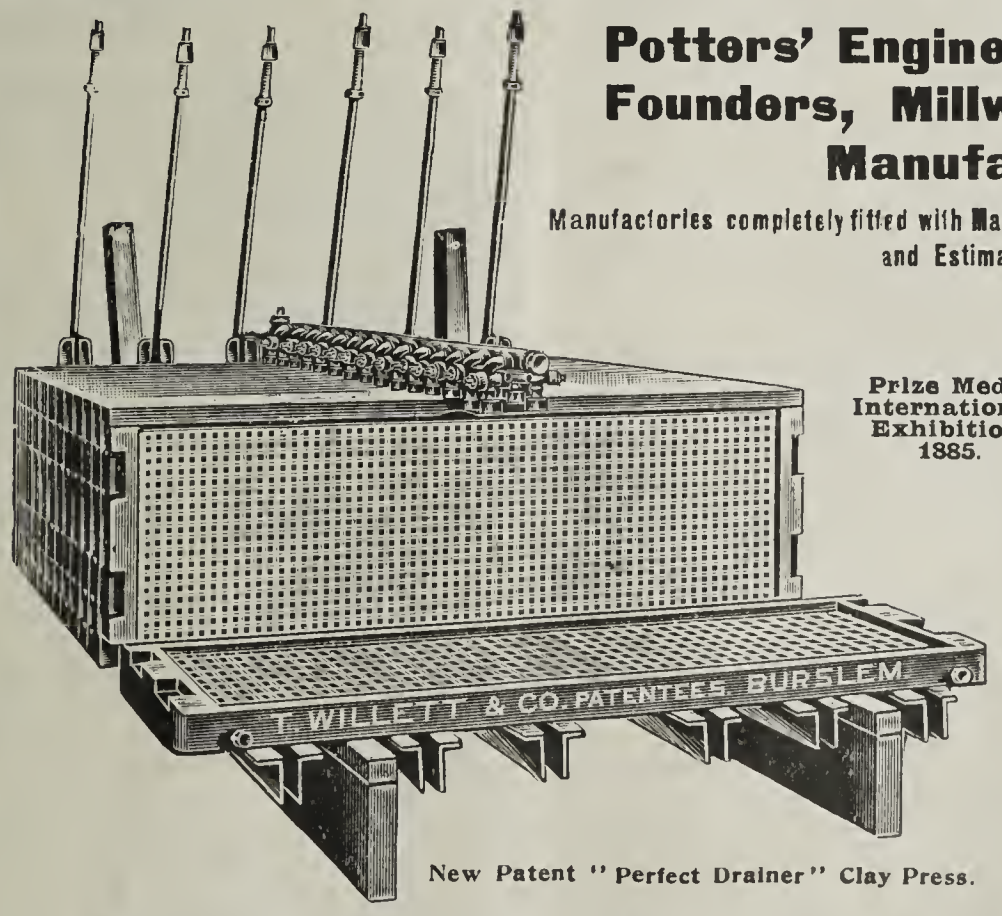
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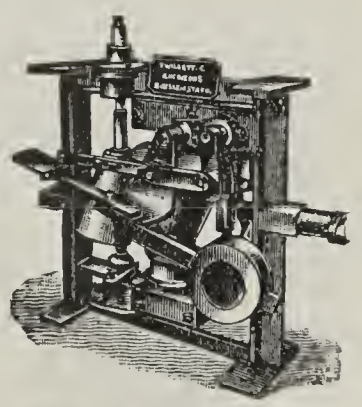


Patent Automatic Cup-making Machine

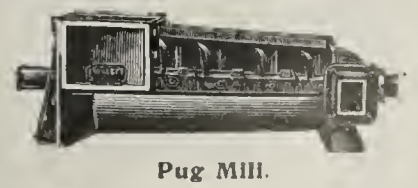


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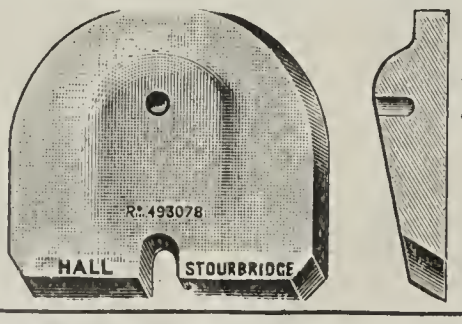
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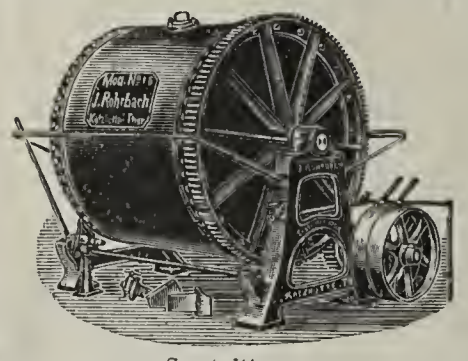


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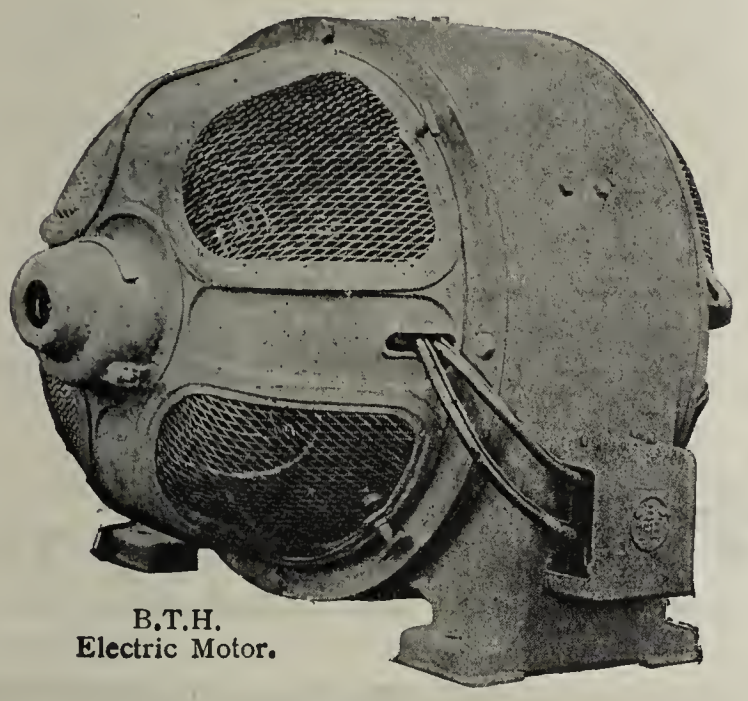
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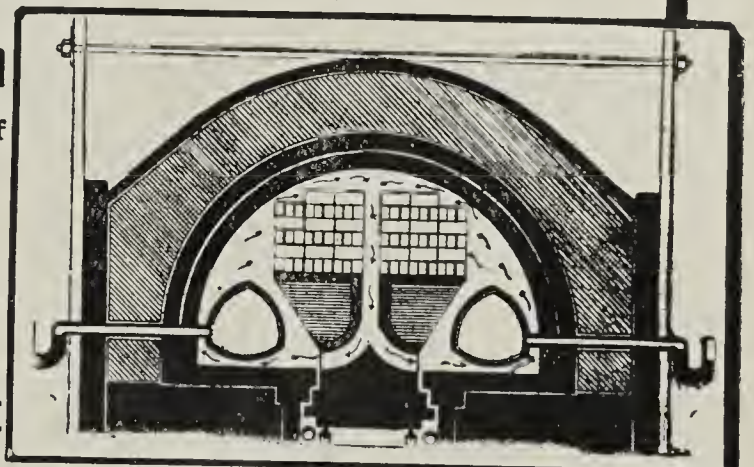
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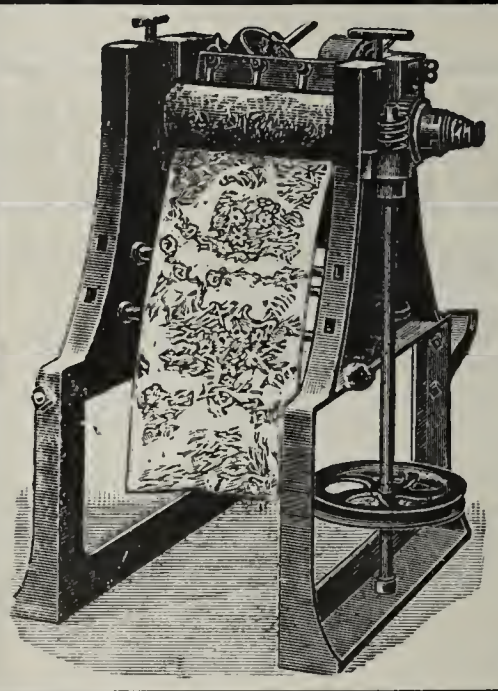
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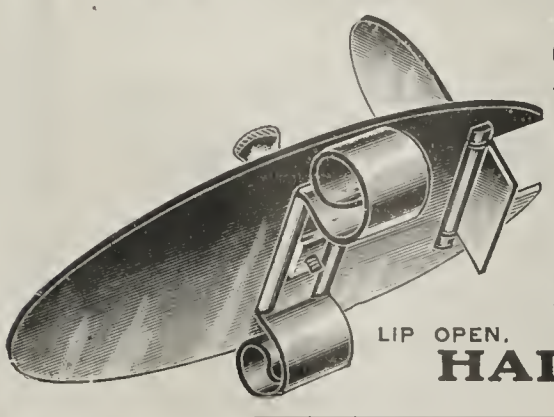
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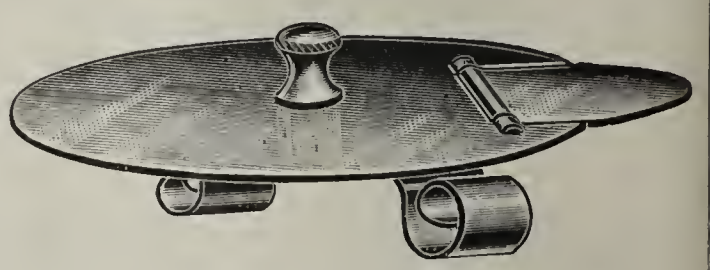
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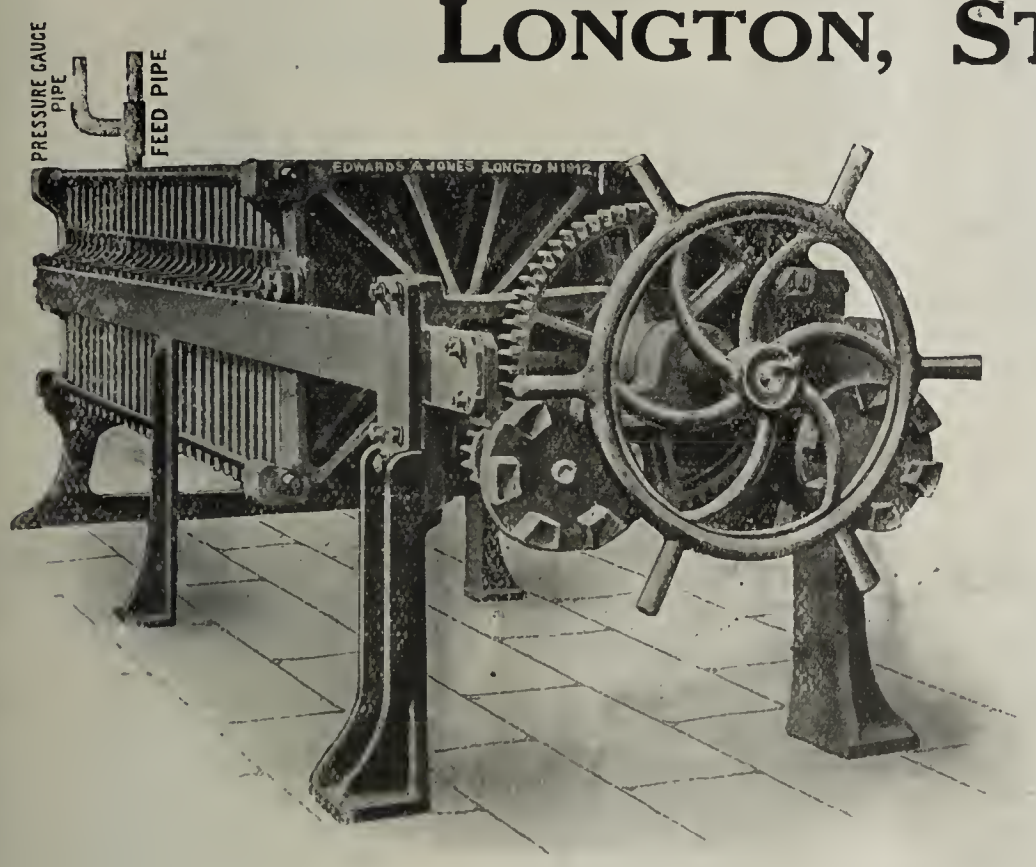
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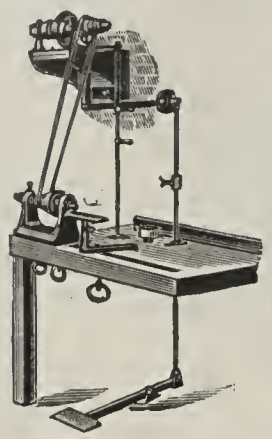
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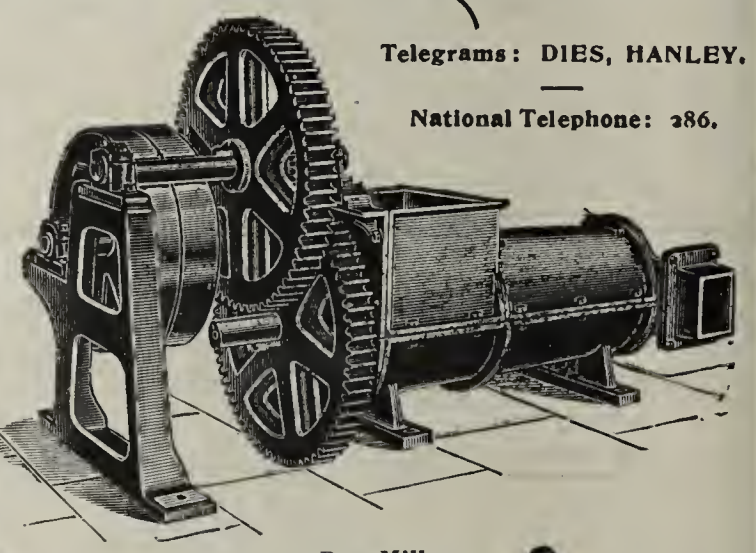
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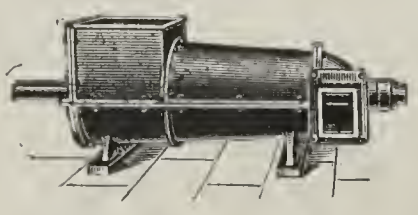


Potter's Lathe.

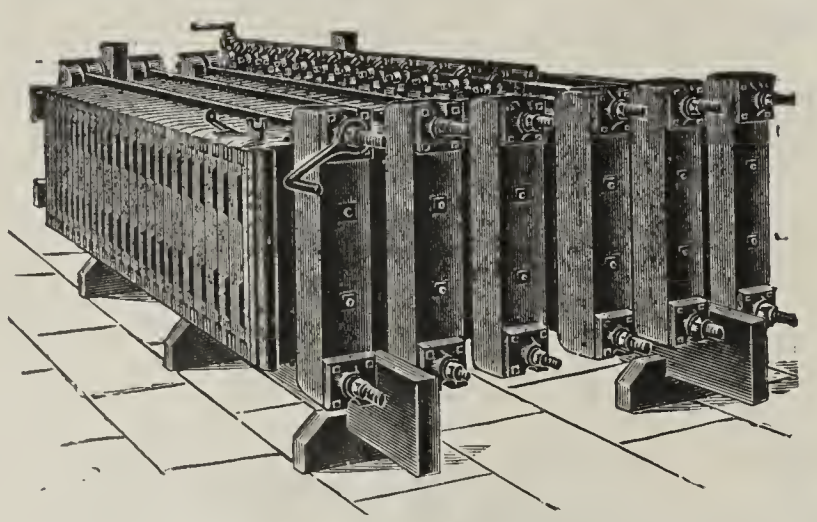
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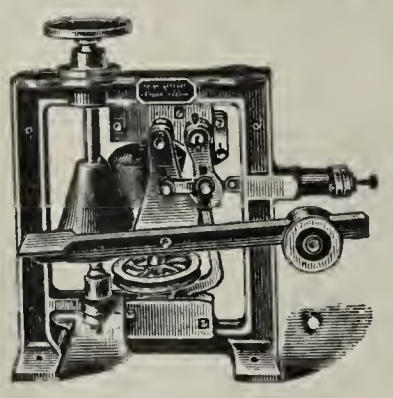
Pug Mill (with Gearing).



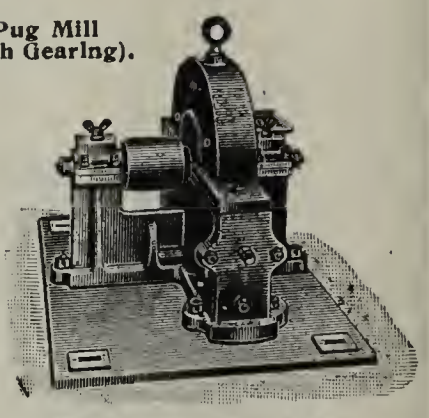
Pug Mill (without Gearing).



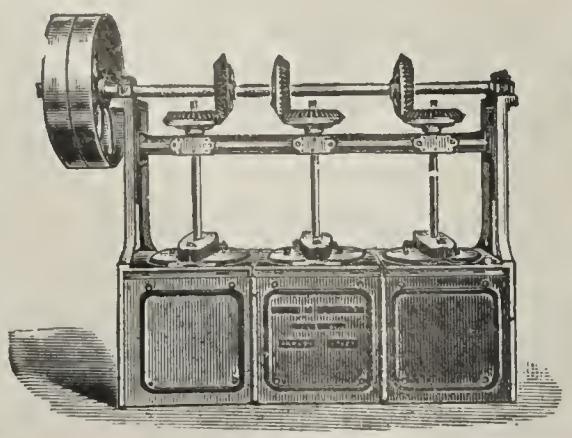
Filter Press.



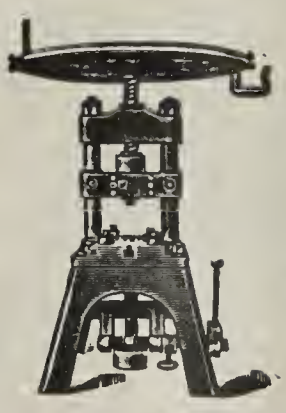
Throwing Wheel.



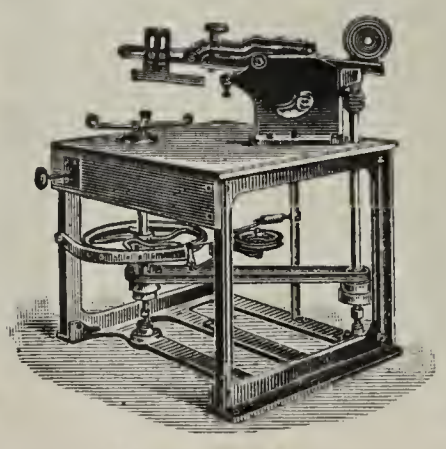
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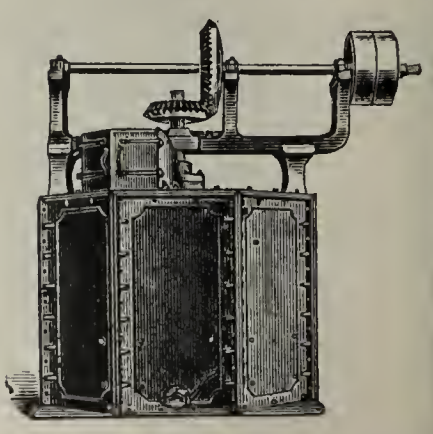
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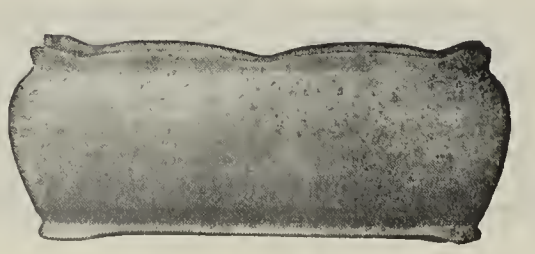
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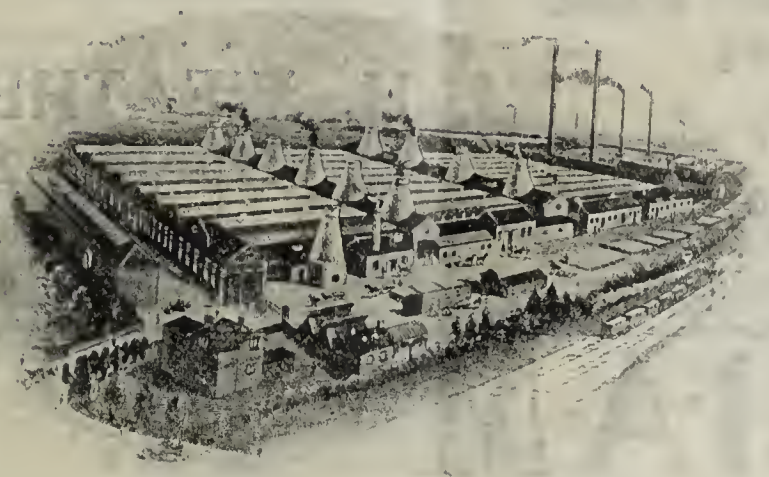
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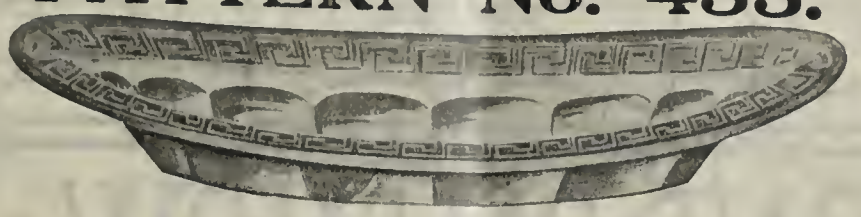
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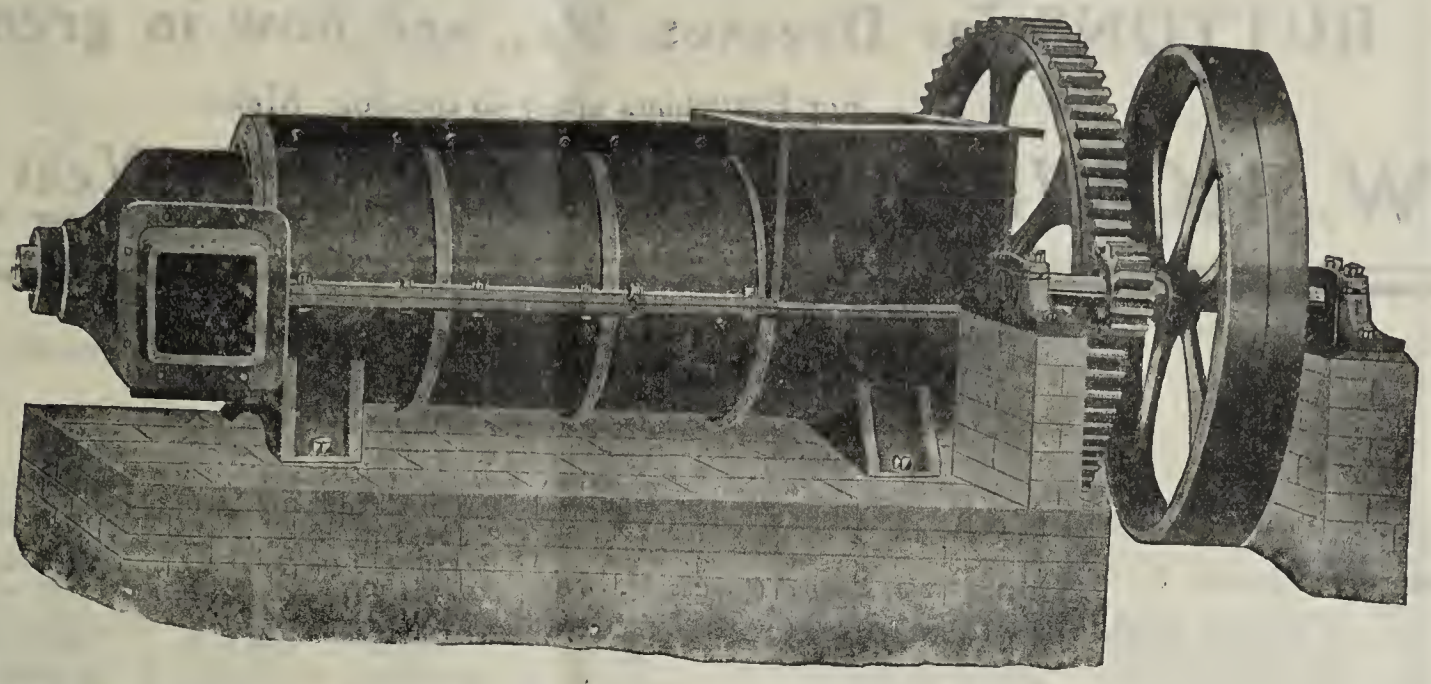
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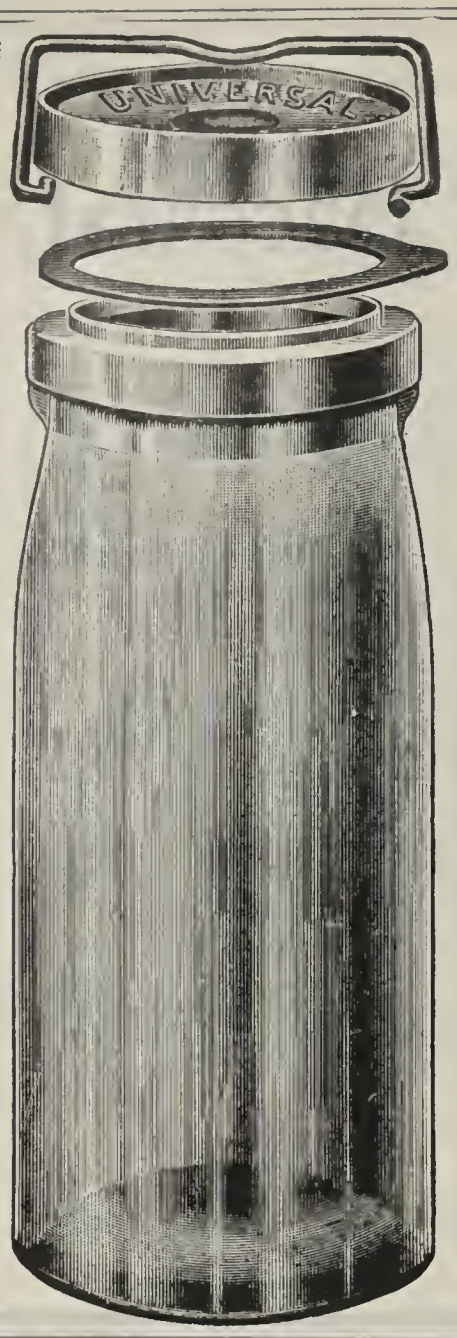
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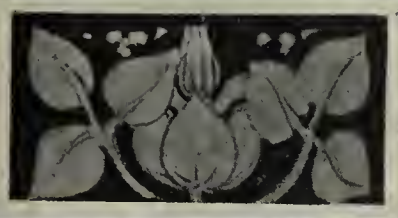
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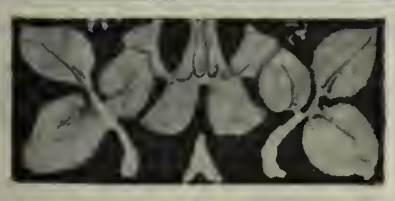
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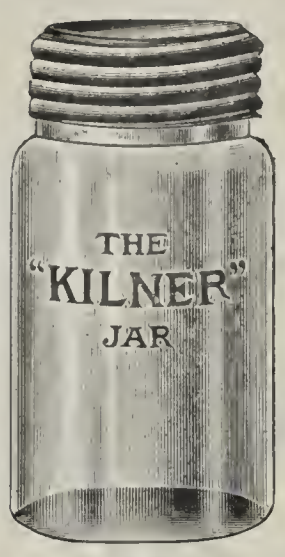
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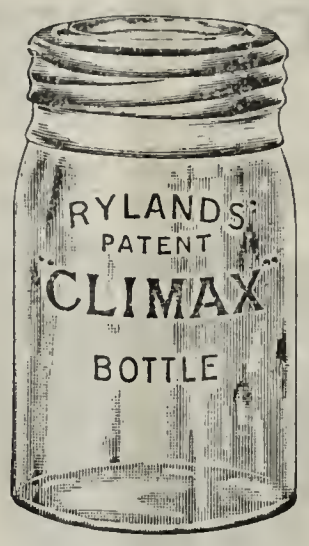
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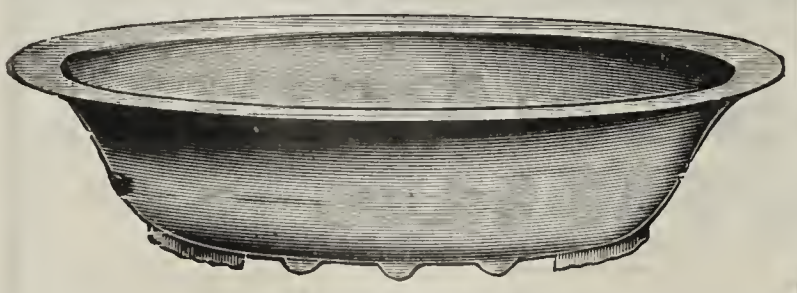
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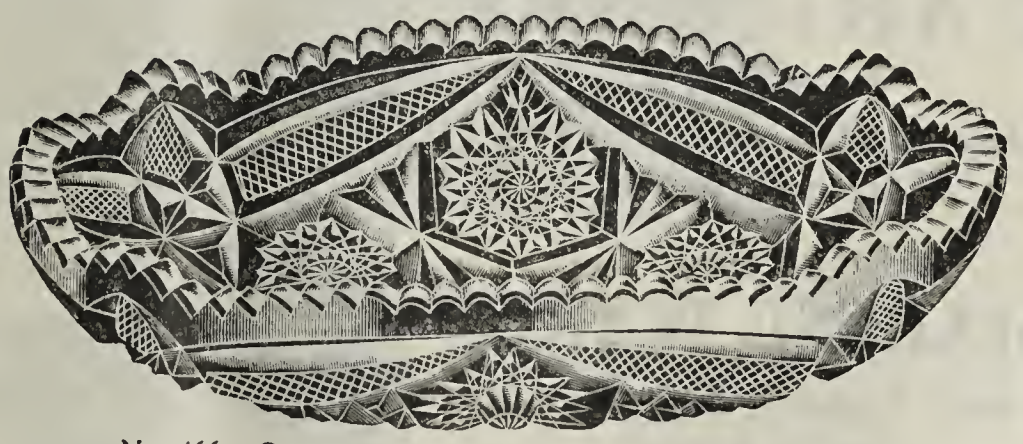


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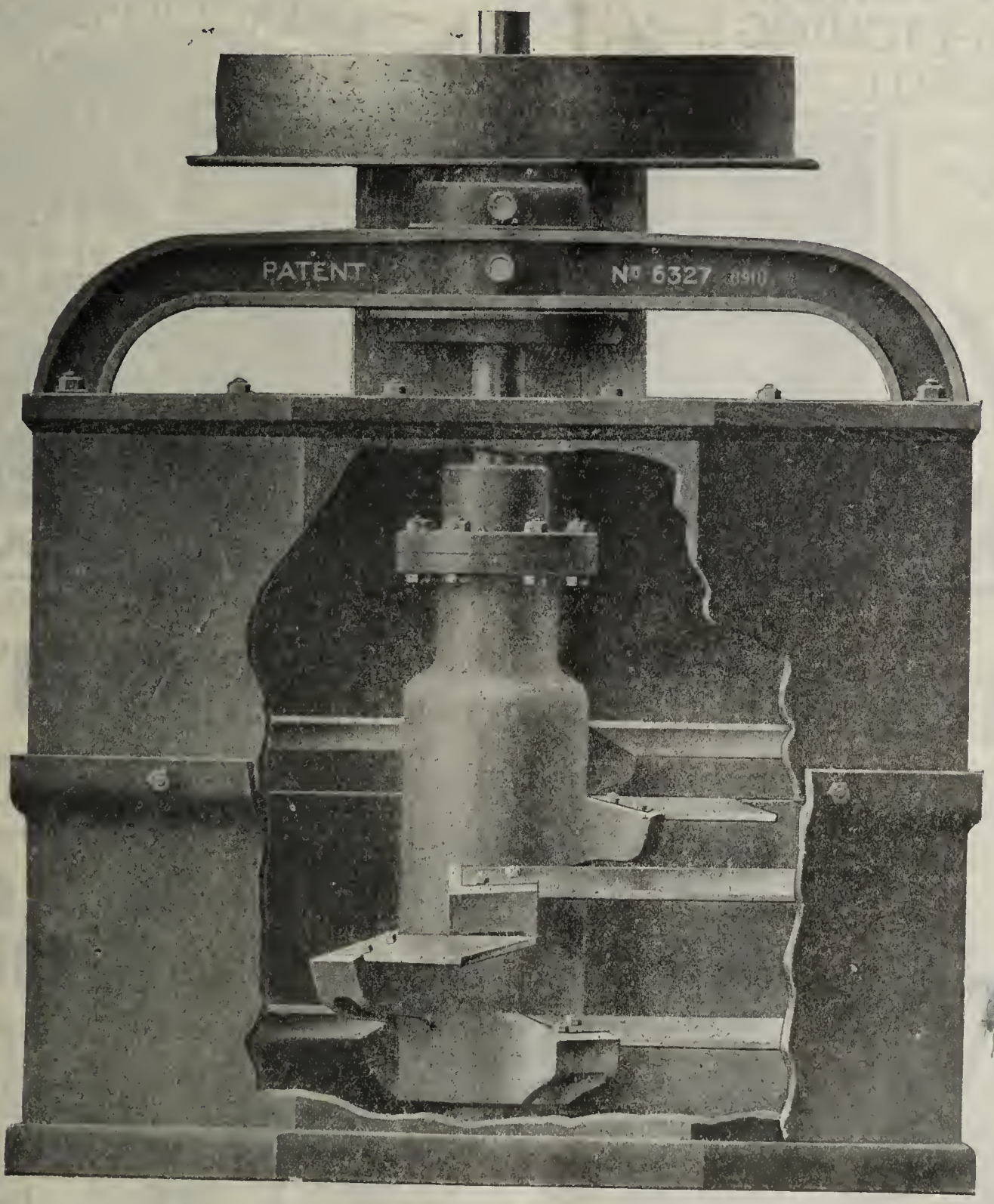
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Editorial Notes.

ON PHOTOGRAPHING POTTERY AND GLASS.

FROM our extensive experience in handling photographs of pottery and glass sent in by dealers or manufacturers we are forced to believe that many of these gentlemen who make use of photography in their business are unacquainted with some of the elementary principles that make or mar the success of the photographic process. The camera can be made such a valuable ally in providing illustrations for advertisements, postcards, and circulars that it is a pity that its use should not be better understood; and a few hints on the subject may not be unwelcome.

Firstly, we would say, look carefully to your grouping. If your wares are set out in tiers, see that the lighter pieces are above and the heavier below. Make sure that you have included all that you wish and nothing superfluous. In preparing blocks we have often had to paint out intruding articles (or individuals), while, on the other hand, we have actually been asked to "paint in" a plaque which had unintentionally been omitted from a particular row.

Akin to grouping is the question of backgrounds. Manufacturers, in particular, are apt to arrange their beautiful articles on ugly bare boards or packing cases with only a rough wall behind. A few sheets of clean paper judiciously used will set off the wares to far better advantage.

The great foe of the photographer in dealing with pottery and glass is the reflection of light from the smooth polished surfaces. Careful study of the direction from which the light comes will help to obviate this difficulty, and much can also be done by a suitable employment of opaque screens.

The technical details as to time of exposure and focussing also need strict attention, and every photographer, whether amateur or professional, should have thoroughly mastered the technique of these before he attempts to deal with such a ticklish subject as ceramic photography. For preparing process blocks silver prints with a glossy surface give better results than bromide prints in grey or brown, with a matt surface. Have the photographs made as large as possible (half or quarter plate) as the details in a process block show more clearly if reproduced slightly smaller than the photo.

Finally, when you have got your photograph, treat it with proper care. Keep it flat, if possible; do not roll it unless absolutely necessary, and certainly never fold it, as this renders it quite useless for purposes of reproduction. A photo is much more easily handled by the block maker if it is mounted on card, and there is less risk of damaging it.

POTTERY EXPORTS AND IMPORTS IN MAY.

THE export trade for May was the best month's business turned over this year, though by no means equal to the aggregate for some of the later months of 1912. The total was £295,108, compared with £189,993 in the same month of 1912, and £258,215 in 1911. Again, it has to be pointed out that comparison with the corresponding month of last year forms no criterion as to the state of trade, for

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and at the American and Colonial Agencies mentioned above.

May, 1912, was almost as much under the coal strike influence as was April. Canada was still easily at the head with another satisfactory turnover amounting to £46,930. This aggregate was over £500 better than in the preceding month, and over £2,000 above that of May, 1911. The American business, though far from satisfactory, proved better in the total than was anticipated, reaching £38,711, as against £30,349 in the previous month and £34,482 in May of 1911. The South American demand continued brisk; it was better than a month back, and very much better than a couple of years ago. The figures were :— May, 1913, Brazil £33,499, Argentine £27,071; May, 1911, Brazil £17,642, Argentine £21,955. The East Indian trade was less than in April, but better by £4,300 than in May of 1911. The South African shipments continued on the upgrade tendency, amounting to £11,930, over £800 better than a month ago, and £1,500 above the May, 1911, figure. Business with the Antipodes, totalling up to £33,643, was far from satisfactory, representing a big fall on the preceding month, when the aggregate was £37,384. Trade with "other countries," totalling up to £68,927, was rather lower than in April and not much better than in May of two years back. The German business was on a very low scale, but the French trade continued at the higher standard which has obtained of late. The five months' trade aggregated £1,413,148 as against £1,115,146 in the same period of 1912, and £1,250,293 in the corresponding five months of 1911. A noticeable feature of the five months' returns is the big share of South America in the total, Brazil and the Argentine having contributed to it no less than £267,857. Canada's total for the same period was £206,825.

The value of the imports in May was £94,329, as against £84,826 in the same month of 1912, and £95,803 in 1911. Deducting re-exports, the net imports for the past month were £85,984. For the five months the gross value of the imports was £434,010, as against £381,999 in the same period of 1912, and £425,054 in 1911. Deducting re-exports, the net value of the past five months' imports was £393,379.

CUSTOMS' VALUATIONS.

THE general tendency to convert all Customs' duties from the specific to the ad valorem system may perhaps be reckoned an improvement, when everything is taken into consideration; but there are points of danger about it which are very generally overlooked. In the new American Tariff most of the duties will be calculated in this way, but there does not seem to be any adequate means provided whereby a valuation corresponding with the actual facts may be invariably secured. Indeed, this is an extremely difficult matter, and one which requires far more expert knowledge than is likely to be at the disposition of the United States Government. In Egypt, where a regular ad valorem system has been in existence for a long period, the practice was to hold a kind of committee meeting at stated intervals and to fix values for a short time, say, one or two months; but it will be easy for our readers to understand that this occasioned some very unfair impositions from time to time. Under these regulations it happens frequently that the fixed values are widely different from the real values, and consequently that the shipper has appeared to supply documents vastly under-valuing, or it may be over-valuing, the shipment.

Under the new American Tariff law the penalty for under-valuation is very heavy, being for each offence a fine of not exceeding £1,000 or imprisonment for not more than two years; and when one remembers the extreme rigour with which the American Custom laws have hitherto been administered (except where judicious bribery has interfered with them), it is to be feared that a good many victims, some guilty and some innocent, will be caught in the meshes of the new regulations. There is a provision in the proposed law that "the owner, consignee or agent of any imported merchandise, may at the time when he shall make entry of such merchandise, but not after either the invoice or the merchandise has come under the observation of the appraiser, make such addition, in the entry to, or such deduction from, the value given in the pro forma invoice, as in his opinion may raise or lower the same," &c. But it is to be noted that this must be done before the invoice comes before the Custom House official. We fail to see that the importer is likely to be aware that there is any discrepancy until he is advised of it by the Custom House; and then, according to this regulation, it will be too late to make the alteration, and he will be liable to fine and imprisonment. No doubt some means will be found to mitigate the horrors of this system, but it is probable that a good many people will suffer in the beginning.

We wait with interest to see what arrangements will be made for dealing with the values of articles subject to violent fluctuations in price. The safer plan with all these is to fix the duty by weight, although, of course, this means really a fluctuating duty. In any case it is fairly obvious that a Custom House tariff involves enormous injustices and inequalities, and all that can be done in the present social and political condition of the commercial world is to plead for mitigation.

THE INCREASE OF RAILWAY RATES.

INTEREST in the action of the railway companies with regard to rates on goods is attracting more attention, and we are glad to see that a large number of people thought it worth while to attend the annual general meeting of the Mansion House Association on Railway and Canal Traffic. Sir Alfred Mond pointed out the immense importance of the rates question, and justly referred to the folly of assuming that Parliament had no time to attend to it when time was found for many matters of comparatively trivial interest. The Association has undoubtedly done good work on behalf of the commercial community, and it deserves the utmost possible support. What is required to be impressed upon the House of Commons, as the most important underlying fact of the whole situation, is that for a great number of years the railway companies have ceased to make any attempt to increase their services to the public. The railway service of all other commercial countries has been progressing during the past 30 years; but that of Great Britain has stood still, if it has not actually retrogressed. It is the duty of the House of Commons, as the custodian of national interests, to take such steps as may be necessary to reverse this outrageous state of things; and as the railway companies fail to see that their real interests are bound up with progress and not with retrogression, the House must use compulsion.

Of course, the commercial voter has the matter largely in his own hands if he would only act with his own class, as one man. If it were clearly understood that no man interested in commerce would ever vote for a railway director as member of Parliament, whether Liberal or Conservative, Independent or Nationalist, then we might clear the House of the influence of a tremendous vested interest, and be able to deal with the question on satisfactory lines by means of political action; but this is

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probably impracticable. Party feeling on other matters runs too high to allow of such a combination on the basis of commercial interests, and while railway directors and railway lawyers fill the House, we do not entertain much hope of getting through any really advantageous legislation. As we have before hinted, the better method is the direct attack on railway traffic, although it must be understood that we fully support those who are endeavouring to mitigate the various evils of the present system by Parliamentary action.

The question of canal development is now before the country, and it might be feasible to bring a scheme forward for the nationalisation of the waterways, and for their effective working by the State, very much after the example of Continental countries. A vast tonnage of heavy material might be diverted to the canals with great economic benefit to the trader. The railway companies know this very well, and this is why they have, in former times, spent money in obtaining control of canals with the object of hindering traffic on them. If it could be arranged to develop canal traffic and motor haulage at the same time, the attack upon the railway position would take place simultaneously in front and in rear, and the companies would soon be brought into a more chastened frame of mind.

AMONG THE ANTIQUES.

(BY OUR OWN REPRESENTATIVE.)

THE writer was extremely favoured in being able to drop into the Manchester Art Gallery a week or so ago in order to take a glimpse of the marvellous collection of Chinese pottery, porcelain and applied art, which was opened there by Sir Hercules Read, of the British Museum, on June 18. As has been said elsewhere, "it is a collection of the best of its kind, and practically nothing but the best." One would like an opportunity of reviewing the exhibition fully, but as that is impossible just here, it must suffice to say that probably never before has an exhibition of Chinese art so thoroughly representative of the different periods of its evolution, and so excellent in kind, been gathered together in so concise a form for the enlightenment and education of a British public. And to spend an hour or two amongst these relics of the past, and to ruminate, as one cannot help but do in inspecting them, with regard to their antiquity and the artistic excellence of the people who produced them—or at least some of them—as far back as 1000 B.C., is an education indeed.

The exhibition covers four rooms, and in each of them there is a wealth of material and knowledge. The writer, at this particular juncture, will not attempt either to graphically describe or appraise it. To do so would require far more space than is here available. One must, however, call attention to the magnificent collection of no less than 250 snuff bottles, representing almost every form of the Chinese miniature art of the eighteenth century, gathered together in a single case lettered G, in room 1; the Ming Cloisonné enamels contained in cases C and D; and the silk embroideries, which, although not coming within the scope of this journal, must be mentioned; the extremely fine egg-shell perforated porcelain lanterns of hexagonal shape, and painted with flowers in the panels with a skilfully diapered ground in famille rose, being No. 168 in case 1, room 2; a magnificent collection of choice blue and white porcelains, principally of the reign of K'ang Hsi, late seventeenth and early eighteenth centuries, contained in cases O and P; the exquisite ensamples of powder blue contained in case Q; the flambé glazes enclosed in case U, amongst which stands out pre-eminently the large ovoid jar No. 525, with a rich bluish purple flambé glaze with pronounced white opalescent streaks, and the bottle-shaped vase with everted scalloped neck of a rich blood-red glaze with blue and white curdled opalescent streaks, No. 526; cases W and X, containing fourteenth to sixteenth century jars and figures; and the collection of turquoise glazes of the fourteenth century in case Y. Of room No. 4 one could not speak too highly. This includes a number of wonderfully modelled figures, horses, &c., of the Han and T'ang periods, the former from 206 B.C. to 220 A.D., and the latter from 618 to 907 A.D. The figure of Kwan Yin, about 4 ft. in height, standing and holding a book of the sacred law, and made in greyish white porcelain, is a most marvellous example of the artistic excellence of the ancient Eastern people, and without attempting to review the other wonderful examples which the room contains, may it just be said that it is well worth while to pay a visit to the Manchester Art Gallery to see this piece alone.

The task undertaken by Mr. William Burton, M.A., in the collection, arrangement, and classification of this exhibition has been formidable indeed, and only those who take the opportunity of seeing the collection—and no one who can afford the time should miss it—can hope to judge the extent of its educational value.

A very interesting loan collection of some beautiful specimens of early English porcelain has quite recently been deposited and placed on view in the British Museum by Charles Borradaile, Esq., and is now being shown in the British ceramics room in case No. 38. The collection includes a pair of painted and gilt pastoral figures in the Watteau style — shepherd and shepherdess—made at Bow about 1760, and marked with anchor and dagger. These are two extraordinarily fine specimens, being well modelled, and having bright and permanent enamels. There are also some very fine examples of figures made at Bristol and modelled by "Tebo" about 1775, one of these being a milkmaid painted in colours, and having an incised mark T°, and the others being a pair of coloured and gilt seasons figures—boy and girl—representing autumn and winter, by the same modeller and produced about the same year, being part of a series of four representing the four seasons. Several pieces of the Plumer service, having a gold band, a gold dontelle edge, and green and gilt festoons, with head and monogram in cameo, made at Bristol about the year 1775 and marked with a cross, are well worth some attention, as well as a cup and saucer of the Burke service, being made by Champion about 1775 for Mrs. Burke, the wife of Edmund Burke, then member for Bristol, the mark being a cross. Other pieces in the case include two cups with a gilt decoration on a cros bleu ground, made at Chelsea about 1763; a cup with semi-oriental figures and solid gilding on a cros bleu ground, made at Chelsea about the same period, and marked with a gold anchor; a coffee cup and saucer of the Sir Robert Smyth service, with monogram R.S. in a chased gold oval, of somewhat similar type to the Plumer service and made in Bristol about 1776; a coffee cup and saucer of the Burke Smith service, made at Bristol about 1774-5, marked with a cross, also similar in design, but having a different monogram; two cups with hand-painted naturally coloured flowers in a gilt ground, made at Chelsea about 1760, marked with a gold anchor; several pieces of the Gladstone service, made at Chelsea about 1763, in a rich blue ground, with chased gilding and painted oriental birds in white panel relief, this service being originally in the possession of Mr. Gladstone, and being lent by him to the South Kensington Museum in

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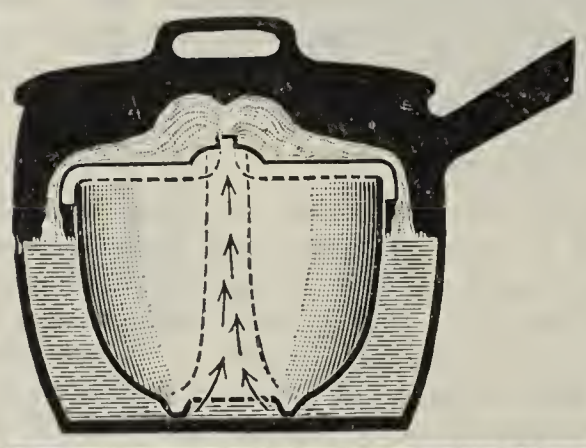
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1866; a covered cup and saucer with pink ground, chased gilding, and richly plumaged oriental birds, made at Chelsea about 1765, marked with a gold anchor; two cups with oriental birds in a solid gilt ground, produced about the same period and having a similar mark, and a turquoise covered cup and saucer treated in the Sévres style, of the Derby-Chelsea period, marked in gold with a D and anchor combined. There is also a very fine helmet-shaped ewer and basin, made at Chelsea and painted in the Meissen style, and a small inkpot, which, although it is unpretentious, should command interest on account of the fact that it bears a view of the Chelsea Church of that time. One is sorry to see that this particular piece is rather unfavourably shown in an out-of-the-way position. A Chelsea terminal vase made about the year 1770 is a finely modelled piece, treated in light green with painted panels. Two large cups in Chelsea china of the Vincennes and Dresden styles are well worth seeing; indeed, the whole collection, although small, is a capital one.

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

CHARGES FOR STRAW AND PACKING.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Replying to your June correspondent, "Live Dealer," my experience as a representative of one of the "progressive firms" up to the present is that this new method is not being supported in the whole-hearted manner the few manufacturers who have fallen into line were led to believe. A revolution of old-standing methods necessarily required many hours' careful consideration in the alteration of prices, and it must be admitted that an enormous amount of labour has been involved. Unfortunately the result is anything but encouraging. One has to be constantly pounding away "No plus, no packing charges," after every price quoted, and I have experience of many instances where dealers have refused to order certain lines when this remark was omitted, and afterwards, when attention was called to it, the lines in question were ordered. Even members of the Association have returned invoices which had been priced with new inclusive prices because they appeared at sight to be so high, and have evidently done so without any examination, which was afterwards proved when goods were re-invoiced at old prices, and only the difference of a few pence on an invoice of £15 or £16 was the result. Other dealers (also members of the Association), unfortunately, have evidently never really reckoned the actual cost of goods on old prices and terms, and they now take a lot of convincing that, say, a dinner set that was 13s. 9d. plus 12½ per cent. and packing charges extra, would really cost them nearer 16s. on the new incorporated prices. It has been my lot many times to give examples how the new incorporated prices are arrived at, but unfortunately a representative has not always time to price out every individual piece to his customer.

It is hard on those manufacturers who have adopted this new system if they have to be the losers. Whether the China and Glass Association is the power amongst the trade it thinks it is (or, indeed, ought to be), I cannot say, but I am much afraid that unless a firm stand is taken amongst themselves to introduce some method either to encourage these few progressive manufacturers or to bring the other manufacturers into line, there will be no alternative but to revert to the old system again. Some few dealers certainly show a substantial approval, but the responsibility rests with the whole of them, and from my own personal experience I feel sure that a little firm pressure from the Association will bring about the desired effect.—Yours, &c.,

"A REPRESENTATIVE OF A PROGRESSIVE FIRM."

June 16.

ANSWERS TO CORRESPONDENTS.

J. A.—The makers of ironstone china dinner ware with the Royal coat of arms up to 1861 were C. Mergh & Sons. They were succeeded by the Old Hall Earthenware Co., Hanley, who discontinued business about 1903. In our 1903 Diary a list of some hundreds of this firm's patterns and shapes will be found, and names of purchasers. You may have to write to each one in the endeavour to find the purchaser of the pattern you refer to, and having done so, learn that this particular one was destroyed years ago.

Glass Materials, Portugal [3040].—Black ash is crude carbonate of soda made in the Leblanc process at a certain stage of the furnacing. It can scarcely be had now, as sodium carbonate is mostly made by the ammonia-soda process. Brass filings is comminuted brass, the well-known alloy of copper and zinc, produced by the coppersmith or worker in brass abrading it with a file. Copper scales consist essentially of black oxide of copper, and are produced in its metallurgical working. Green siftings: the meaning is doubtful, possibly a green salt of copper, say, verdigris. Calcined ash is possibly soda ash, or, as you say, it may mean potash. Slacked lime is quicklime CaO, or oxide of calcium. Refined ashes is possibly refined potash. Lead generally means metallic lead, but in this special case it may mean red lead or minium, or, more possibly, litharge. Be guided by the context. Spar we take to be calcium fluoride or fluor spar. On the other hand, we think your calcareous spar is our Iceland spar or calc spar.

Inquiries Answered through the Post.—Tea ware, Registered No. 21,779; dinner ware marked "Clyde T. & T." on badge; china spirit barrels; "Saareguemines" earthenware; glass flower blocks of particular patterns; tea ware with mazarine blue band and brown printed border; stoneware jugs with metal lids. Tea Ware, Rd. No. 423,761; toilet ware with ribbon and bow round each article; china marked "Stanley" Rd. No. 151,437 (for this we had to search our records for 23 years back).

Legal.

Shops Act Prosecution.—At Conway recently, Thos. Parry, Bangor-road, Conway, was summoned for a breach of the Shops Act by keeping his premises open for the sale of fancy pottery after 1 p.m. on May 18, the early closing day. The Inspector under the Act stated that at 3 p.m. he saw three persons being supplied at defendant's shop with fancy pottery. On being spoken to the defendant claimed the right to keep open all day on Wednesday in Bank Holiday week, but the witness stated that this privilege could only be obtained by closing on the Bank Holiday, which defendant did not do. Defendant was fined 1s. and the costs.

Litigation through a Joke.—At Woolwich County Court, on June 3, Thos. Rickwood sued Nettlefold & Co., Ltd., glass manufacturers, Anchor and Hope-lane, Charlton, S.E., for £1 9s. 8d., alleged to be due for a week's wages, and in a cross-action the firm claimed £1 17s. 6d. damages from the plaintiff for loss of time and profit through plaintiff leaving without notice, whereby 18 glass blowers were

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topped for half an hour. Plaintiff alleged that he was ompelled to cease work because of threats made by the lass blowers, because he had made a joke at their expense.)n behalf of the firm it was stated that each of the blowers endered idle could have produced 20 bottles in the half-our. The Judge held that the plaintiff began the quarrel y making a joke another man did not like. He found for he firm on the plaintiff's claim and dismissed the counter-laim.

Neglected Boiler at a Pottery.—At Radcliffe (Lancs.) on une 23, A. & J. Gilbert & Co., Ltd., Stopes Pottery, near adcliffe, were summoned for not having had a steam oiler competently examined for 14 months. The factory ispector stated that the boiler was in a most neglected ondition, and he did not think that any insurance company ould take a policy upon it. There might have been a rious accident, and he asked the Bench to make an order r the boiler to be examined. He added that he was afraid at the manager would not only blow himself up, but the orkpeople, and some of the persons in the neighbourhood. or the defence, Mr. Pickstone said the boiler was used lely for drying purposes, and not for power. He suggested at only a technical offence had been committeed. The ench imposed a fine of £2 and costs, and ordered the m to have the boiler examined within three days.

Leaving Work Without Proper Notice.—At Worcester on ne 9, Albert Lane was summoned by the Worcester oyal Porcelain Co., Ltd., for £1 damages and costs for aving work without notice. Mr. S. Southall, for the mpany, stated that the terms of the defendant's em-oyment as a china painter were a fortnight's notice on her side. The defendant was treated with every possible nsideration at the works, but notwithstanding that he t without giving any notice at all, and caused the firm convenience. Mr. E. P. Evans, managing director, ated that the defendant came to him on May 22 and said wanted to leave, and that it would be inconvenient r him to give notice. Witness told him that if the m to whom he was going was a respectable one they uld agree to wait the term of the notice, and he promised fendant that if he lost the appointment they would ain his services. Defendant's solicitor suggested that ere was not much work in Lane's department at the ne, but this was denied. Mr. Evans went on to say at Lane gave notice on a Tuesday to leave on the turday following, but witness told him that the firm uld not consider that a proper notice by any means. m. Andrews Hawkins, foreman over the department, d that defendant's leaving was a considerable loss to e company, and the damages claimed were small and in way vindictive. The Bench held that a fortnight's tice did not form part of the original contract with the fendant, who ought to have given seven days' notice. ey awarded the plaintiffs 7s. 6d. damages.

A Solicitor's Cut Glass Jug.—(Special Report.)—On ne 24 at Clerkenwell County Court a claim was made Ernest & Co., china and glass dealers, 2, The Exchange, swell-hill, against Harry Dade, solicitor, 23, Queen's-enue, Muswell-hill, for £1 5s., in respect of one cut-glass ; made to order. Mr. Ritter was counsel for the defend-, who counterclaimed for £1 10s., the value of an ique cut-glass jug, or its return. Mr. J. Jacobs, of the intiff firm, gave evidence in support of the claim. plying to Mr. Ritter, witness said the glass jug brought their establishment had its lip broken. The order en to them was to match it. They did not under-e to make a replica of the article, but to provide a jug d-made, as near as possible to the pattern. Witness tended that it was against the custom of the trade to esponsible for broken patterns. Replying to Mr. Ritter, witness said the glass of the pattern produced was not antique but modern. Asked: Yours is quite modern? he replied: Oh, yes, we admit that. We cannot make antique goods. Judge Cluer: Some people I have come across profess to. Defendant, in evidence, said he valued the jug, as it came to him from an old friend. The jug supplied by plaintiff was not of the same type. Mr. Jacobs: Do you dispute that the order was given by your authority? I knew nothing about it at the time, but I adopt it. His Honour: He ratifies it. Kate Powell, a servant in defendant's employ, said she accidentally broke the lip of the jug. She took it to plaintiffs and asked them to make another jug of the exact pattern. Mr. Jacobs said they would. Evidence was given by the manager of the glass and china department of Jones Bros., Holloway. A number of pieces of the broken jug were produced in Court. Witness said that in his opinion it was old cut glass. As far as he could judge from the pieces, the value of the jug intact would be about £3. The damage to the lip would have lessened its value by about 50 per cent. Witness added that his firm always returned patterns whether broken or sound. It was the custom of the trade. Mr. Jacobs: Would your firm take liability for patterns getting broken? Witness: No. His Honour said plaintiffs were bound to succeed. If the jug was not to pattern, defendant should have returned it, but he did not. Regarding the contention that the pattern should have been returned in the same condition that it was delivered to plaintiffs, even defendant's own witness said his firm took no liability if patterns were broken. That was a commonsense view. Plaintiff had no special instructions that the damaged jug was to be returned in the same condition, and they could not be held liable for what had happened to it. Judgment must be for plaintiffs on the claim and counterclaim.

Glass and Porcelain in Persia.—The Russian Consul in Gilian has informed the Russian Foreign Trade Informations Department of the position of the glass and porcelain business in Persia. Last year Persia imported 8,950 poods of glass goods, 7,463 p. of window glass, 1,102p. of plate glass goods, &c. The annual sale of lamp goods falls mostly to Russian houses. Fedoroff Brothers, of Moscow, do about 80 per cent. of it. Window glass is sold in large sheets by the houses of Maltzieff, Lebedieff, and Beganoff. The current goods are mostly supplied by the house of Lebedieff, owing to the convenient sizes into which they are cut. But Maltzieff's, although their glass is finer, lose business by cutting their sizes smaller. Both Maltzieff and Lebedieff sell their glass in cases containing thirty sheets each, at 7 roubles 20-50 copecks for first quality, other qualities being relatively cheaper. The prices fluctuate according to available supplies, rising sometimes as much as 2r. per case with the closing of navigation on the Volga. Coloured glass is rarely met with, for in Persia they have almost stopped making windows with pieces of glass of various colours fitted artistically into wooden settings. Tea and coffee services occupy an important position in Persian domestic life, Both cups and saucers should be small in size. Respecting other table goods, not much business is to be done in Persia; for plates and the like the Persians find scarcely any use; but there is always a demand for all kinds of vases for fruits and sweets; and jars, and the like sell for cooling drinks. Gilding and other ornamentation may stimulate business. The prices for these goods are very varied. The Consul thinks that the better kinds of plate-glass may find a market in the interior for "Aine-Kari," a kind of mirror mosaic, with which wealthy Persians sometimes decorate their rooms.

BURLEIGH WARE

Manufactured by

BURGESS & LEIGH,

Middleport Pottery,

BURSLEM, Staffs.

Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

Josiah Wedgwood & Sons, Ltd., Etruria.—One adds the word Etruria to conform to a constitutional procedure. In practice one would think it is almost unnecessary to mention the locality of the Wedgwood works, for the most uninitiated will be aware of the home of the factory founded by the side of the canal in that once secluded parish of Etruria, by the great pioneer of the Staffordshire potting trade. But it is not the factory to which I wish shortly to refer just here, but to their capital London showroom at 26-27, Hatton Garden. I recently called to see Mr. Harry Barnard, their representative, in order to get some particulars of their present specialities. One is always pleased to call at the Wedgwood showrooms, either at the factory or in London. So far as the latter is concerned a visit is pleasurable for several reasons: firstly, that the room is an ideal one for a china showroom; secondly, Mr. Barnard goes to considerable trouble to display his samples attractively; and, thirdly, he is a believer in periodically altering the arrangement of his samples in order to give the room an ever fresh appearance. There is always a lesson to be learned here in the art of displaying wares, and the retailers who have occasion to visit the room might well make a few mental notes, which cannot fail to be profitable. This little preface must be pardoned, because my duty is really to refer to some of the things at present to be seen in the room, rather than to offer an appreciation or criticism of the methods of displaying them, though this might well provide some good "copy" for a future occasion. Naturally, amongst the most prominent lines on show are to be seen the jasper and basalt wares, and these need neither explanation nor encouragement, nor is it necessary to explain their origin. It is, however, questionable whether everybody is as well acquainted with some of the other early triumphs of the great Josiah, reproductions of which are also to be had, and amongst these is the old Ivory Queen's ware, which bids fair to again become exceedingly popular. We illustrate three pieces of this, which everyone will agree are fine examples of symmetrical modelling, and without any decoration whatever, would be considered works of art. The history of the Queen's ware is interesting. Its period is clearly demonstrated by a memorandum which appears in red enamel at the back of a large dish which came into the possession of Sidney Locock, Esq. This inscription is well worth quoting: "This dish was made at Etruria by Wedgwood and Bentley the first year that Wedgwood and Bentley removed from Burslem to Etruria. Signed Enoch Wood." In the year 1762, so it is recorded, Wedgwood presented Queen Charlotte with a breakfast service of this cream-coloured earthenware, and received as a consequence the title of "Potter to Her Majesty." The cream coloured earthenware was consequently called Queen's ware, by which name it has been known ever since. This class of ware has never been neglected by Wedgwood & Sons, Ltd., and to-day it promises to spring into a new life. It is because of this that we have pleasure in reproducing a photograph of three excellent pieces which the writer himself selected in Mr. Barnard's room on his recent visit. A feature of the samples on show at Hatton Garden, at the present time is the underglaze treatment of quite a number. In toilet-ware Josiah Wedgwood & Sons, Ltd., prefer to adhere to the old hand-paintings, which are still very popular. I was particularly attracted to the Greek shape with the Athens pattern in black and gold. This design can be had plain printed in all colours, but the black print with



JOSIAH WEDGWOOD & SONS, LTD. [*Photo. by "The Pottery Gazette."*

CHIPPENDALE

KRYS-TOL

JEFFERSON GLASS CO.,
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THE GLASS OF

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ARTISTIC MERIT

New Samples now on Show at our New Showrooms, fully maintaining our High Standard of Excellence.

Note New Address.

SOLE AGENT:

C. J. PRATT (NATIONAL GLASS CO.),
1, CHARTERHOUSE STREET,
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the gold relief to my mind looks exceptionally fine. One of the tables at the time of my call displayed ware similar to that presented to King George and Queen Mary on the occasion of their recent visit to Etruria, as well as a number of photographs taken on the works at the time. The Imperial Queen's pierced ware is a capital line. This class of goods was originally introduced by Josiah Wedgwood, and was taken up afterwards more enthusiastically by the Leeds pottery. This is a line which, of course, is not an everyday seller, as the handwork entailed in the piercing tends to make it rather expensive, but no one can help but admire it. With regard to the cheaper wares, there are lines on show which break right away from the ordinary, especially to be mentioned amongst which is a green dragon pattern in quite a new feeling. The "Eldorado" pattern, treated in a red ground with a blue and white floral design, has proved a very good seller, especially in the provinces, and another capital line has groups of old Chinese flowers on a black chintz ground, but the latter pattern as a matter of fact can be had with a variety of backgrounds, thus offering quite a nice assortment. There are plenty of small fancy lines, which ought to have a special interest for the suburban buyer, and of which one could make quite a fair show without a great outlay. Some large busts in black basalt claimed my special notice, and a lovely old font, being a duplicate of one made for Essenden Church, was also very interesting. Mr. Barnard is one of those agents who has made a special study of periods and styles, and he is just the right man to advise one as to what would be right for Mayfair and what would be more suitable for "villadom." Those who have not taken a recent opportunity of inspecting his room are recommended to do so.

The Royal Crown Derby Porcelain Co., Ltd.—It is always a delight to get an opportunity of inspecting the show-rooms of this high-class firm, and a recent visit which I paid to their city show-rooms at 15, Charterhouse-street, where they are represented by Mr. A. H. Folker, was no exception to the rule It might be imagined that to one who is accustomed to move daily in ceramic circles a visit to a high-class show-room such as that of the company in question would lose half its interest, but it should be placed on record that I stayed much longer than my programme allocated to this particular call, which at once disproves the truth of any such conclusion. Without further explanation of the fact, may it be said that Mr. Folker is to be highly congratulated on the arrangement of his rooms, and his company upon the choice display which it is possible to see there. There is a prevailing but very mistaken notion in a good many quarters that Royal Crown Derby is solely or mainly concerned with the production of the red, blue and gold Japan designs which are always admired as being "real Derby." It is an impression which should be corrected, for, although the beautiful designs of this type, for which the Derby factory is, and probably will remain always famous, are never off show, and enjoy a sale which doubtless provides the factory with no small percentage of its orders, these designs neither exhaustively nor fairly represent the company's manufactures. This class of decoration is, of course, a famous speciality, having a rare degree of excellence, but it is merely a speciality, and one wonders whether some of the lighter and delicate treatments in ornamental wares which are always on show in the rooms should not become quite as popular and command quite as ready a sale. As regards vases and decorative pieces generally, one would really be very hard to please who could not find something to suit even the most fastidious taste. The pieces shown are, of course, of the very highest order, but here again one must not assume that Royal Crown Derby is necessarily the most expensive ware on the market. Just as there is variety in style and design so there is a range in price sufficient to disabuse the mind of the proprietor of any medium or good class china business that he cannot stock Crown Derby because it is too expensive. Of course, one admits that it is not everyone who can handle the exceedingly ornate pieces which represent the exhaustive labours wrought by such artists as Gregory, Darlington, and Dean. One often hears the expression "a perfect picture," and in the work of the artists mentioned and others of repute engaged at the Derby factory, here you have it, but, unfortunately in some respects, on china. Their work is at once realistic and individualistic, and one is inclined to ruminate as to whether, if some of these exquisite paintings were on canvas instead of on porcelain, they would not be worth half a dozen times as much as they are, though the reason is obscure. There is a very fine range of light vases executed in greens of two colours with painted panels of tropical birds and with very fine gilt borders by Darlington, also a capital selection of works by A. Gregory. Among many distinctly new lines a feature of the room at the time of my visit was a capital selection of ornamentals treated in an unusual and distinctive blue, which is calculated to be in keeping with the severer types of furniture of the prevailing taste. One might almost describe it as a mixture of blue and grey. It is a peculiar but lovely tone of colour, such as will harmonise with anything in the room in which it may be placed. There were also some wonderful combinations of mazarine blue and green on the same piece of ware, the final effect of which is very successful. A centre table of the principal room contained a gorgeous array of ornamental wares, principally of mazarine blues with landscape paintings in lozenges and panels with rich chased gildings by some very capable artists. But there were many other ornamental wares besides vases, such as slabs of different sizes and shapes with hand paintings finished off by a gold edge, pierced trays for cabinet ornamentation, and trinkets in wide variety, so that if one has not sufficient room for a vase—well, a smaller piece can be had to fill up an odd corner. In rich tea sets and dessert sets there is an unlimited range, and in decorative value the company can offer in a single service the exchange for any amount that one may desire to spend. On the lower ground floor one comes to a capital assortment of tea, breakfast and dinner patterns of a more popular price, and an inspection of them convinces one at once that the prices in such lines are not prohibitive. There are many patterns suitable for the middle classes and of services for daily use. For presentation purposes teas and coffees are supplied in half dozens for casing, and quite an extensive trade is experienced in loose after-dinner coffees, which are consequently shown in an extensive range. One table is devoted merely to jugs, sugars and creams, sweets, &c., in plain white china. In reproductions the Royal Crown Derby factory has not remained quiescent, but they have concerned themselves particularly with Chelsea, Bow and Old Derby. The two former have, of course, a peculiar interest for the Derby factory, as anyone who is conversant with the early history of English porcelain will know the two factories in question becoming an integral part of the Derby undertaking. Hence we see reproductions of Old Derby by the present Derby factory which should sharpen the interest. The reintroduction of the Chippendale and Adam styles of furnishings of the Georgian period have naturally resulted in the revival of a number of the severer shapes in use at that period, and consequently, whether one requires something definitely modern or distinctly antique, the company has something to offer. One could write for a long time on the things in Mr. Folker's rooms, but time and space forbid me to say more just here. In the meantime a visit to the rooms is heartily recommended.

E

Soho Pottery, Ltd., Cobridge, earthenware manufacturers, specialise principally in dinner, dessert, tea, and toilet ware, and although a comparatively young concern, they are now universally regarded as fulfilling an important rôle in extensively producing the lines referred to. The undertaking is certainly a very progressive one, and, in addition to the lines which they have been producing all along, they are now turning out some very superior dinner and toilet wares, which are meeting the very best of success from a selling point of view. One recollects that the firm originally started out at Tunstall, within ten years outgrowing the premises there, and being placed under the necessity of either refusing business or looking out for a more commodious site. Needless to say, they preferred the latter, and having become housed in Elder Works, the late Henry Alcock Pottery, at Cobridge, they are now enjoying a turnover quite double that which fell to them at Tunstall. The reason of this is that the "Solian" ware, the distinctive name of the company's productions—and it would be well if every firm had a definite name for its wares—has made its way into the very best houses, probably by reason of the extreme whiteness of its body and the brightness and up-to-dateness of its designs. Whatever the cause, retailers are now anxious to display a "Solian" card with goods of the same name in their windows, and, of course, the firm is always willing to supply them. The London market has taken up the goods energetically, and they are consequently now to be seen in quite a number of the largest stores, whilst the same thing is true in regard to the provincial markets. As regards export, the firm enjoys a particularly good over-seas trade, especially with Canada; and the South American market, with its characteristic bright border patterns, is largely increasing its purchases of "Solian." The dinner patterns which the writer recently inspected were really splendidly got up, and a superficial glance would have given one the impression that they were china rather than earthenware. The light, cheerful designs, essentially of a china type, show up admirably on the perfectly white body of the ware, and the firm is certainly one of very few who have successfully instituted gold encrustation designs on earthenware. Their blue band and gold lines ware is very good value, and sells extensively; as a matter of fact, the cobalt treatments generally are being found worthy of more extensive development. As reproductions are the spirit of the age, the firm has not been left behind in this respect, and they have some reproductions of the old Meissen and Davenport patterns which are extremely good, and as near to the originals as possible. Soho Pottery, Ltd., purchased a good many of the original Davenport engravings, and possessing the complete suites of copper plates, they are able to offer for sale to-day some of the original patterns made by Davenport, amongst which may be mentioned the "Willow," "Arabesque," "Pandoro," and "Peel" designs. The "Solian Delft" pattern, a plain blue print in the original Delft blue, has proved a very good seller, and is now handled by many of the principal houses both in this country and abroad. The covered pieces can be had either round with apple knob, known as the "Apple" shape, or with the ordinary oval cover dish, known as the "Silver" shape. One of the dinner patterns to interest the writer particularly was the 3252 pattern, having a ¼ in. gold band, strong gold edge and line, black key print on the band, and a hair brown spike print border below. This is a decoration quite as finely executed as it would be on china. Another design of the very newest is the "Azalia," done in what is known as goblin blue. The tint is most uncommon, and one can conceive that on a white tablecloth it would look really sweet. That it will prove a good seller I have not the slightest doubt. In toilet ware there are some equally good designs, and they are marked by a brightness which at once makes them favourites. The "Tudor" shape, in solid colour ground, suitable for distempered rooms, sells in big quantities. Mr. Simpson, the head of the firm, is a practical potter, who considers that to get along in the potting business to-day one must have not so much a book of old recipes, as a thorough commercial training, any amount of energy, and "a temper framed in east iron." Although passing through a very busy time, the firm is now busily engaged in bringing out some new shapes and designs for the Christmas, 1913, trade, and dealers are invited to look in at their London rooms, Gamage-buildings, Holborn-circus, towards the end of August, when they are sure to see something attractive, and, what is more, they can rely on getting delivery within a reasonable time.

Mr. John Walsh Walsh, of the Soho and Vesta Glassworks, Birmingham, is making a speciality in table decorations for sweet peas, as these flowers seem to gain in



NEW SWEET PEA HOLDER: MR. J. WALSH WALSH.

popularity season after season. Soon after our present issue is before our friends the shows where these beautiful flowers will be much in evidence will be taking place, and there should be a good demand for appropriate holders. The photograph here reproduced shows how well the latest productions of J. Walsh Walsh lend themselves to displaying sweet peas. Many prizes were won in previous years with the firm's rustic table decorations, and in our opinion the new design is a worthy successor. We understand that quite a good show can be made at a small expense.

Mr. William Lowe, of Longton, specialises largely in tea sets which are made in his well-known "Court China." Some of the designs are quite out of the ordinary. The most appreciated has a border of dark blue, brown and gold, a rich combination which has found favour in many parts of the world. The same pattern is treated with sprays of painted roses underneath, and also with violets, or it is, again, divided into sections with roses and violets between. Another very popular pattern is a best gold band, with the Greek key printed on in black and with a rich brown print under. Gold bands in sections with roses and violets between are equally attractive. The

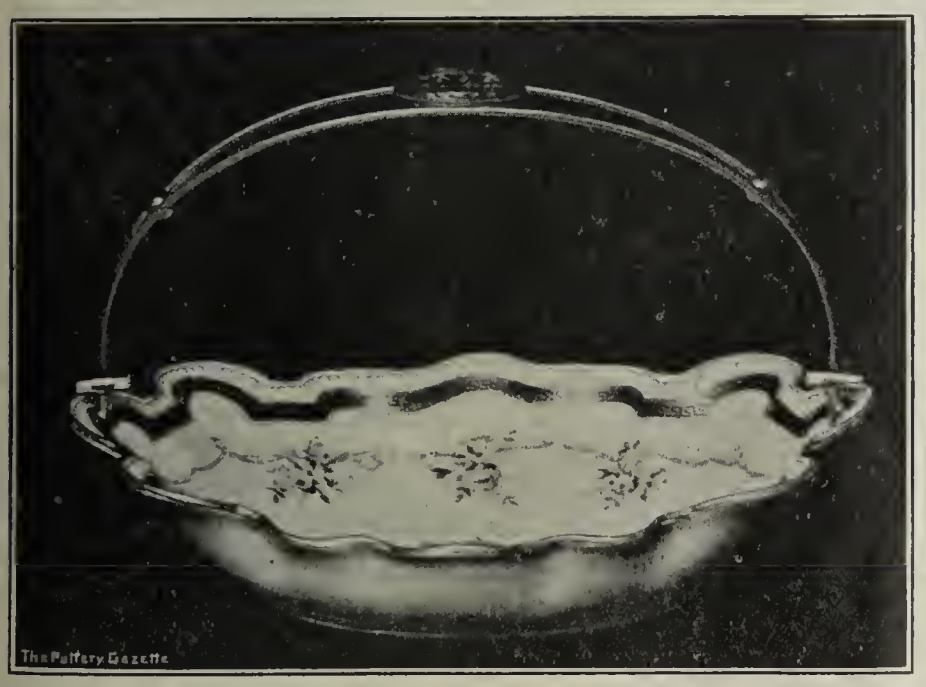
latest designs show ribbons in various colours, mauve, turquoise, &c., with roses suspended from them. Other styles range from neat printed patterns to effective types of Japan decorations. Another outstanding feature



[*Photo. by Harker, Longton.*

EARTHENWARE VASE : MR. WM. LOWE.

of the firm's productions are rose bowls. These articles are shown in a variety of shapes and decorations, small bowls holding just two or three flowers, and others sufficiently large to adorn the centre of a table. The decorations are choice and of an original character, the most popular being dark blue panels and gold in combination with roses or violets. The tennis trays, or " Invalid " or " 5 o'clock " sets are just large enough to hold a teacup and a piece of cake and bread and butter. The shapes are elegant and are decorated in all the varieties of the tea set patterns. Morning sets, coffee sets, milk sets, with sweets, marmalades, butter, &c., are shown in choice decorations.



CAKE STAND : MR. WM. LOWE.

In cake baskets or fruit dishes a new idea has been evolved. Instead of resting on a silver or e.p. stand, the ends of the basket have been perforated and silver handles attached thereto by a very simple arrangement, making a handsome combination capable of being freely handed about at 5 o'clock teas, &c., and easily resting on its own base. A silver handle to adorn one of these has been specially made by the Duchess of Sutherland's Cripples' Guild, at Trentham.

Joseph Gray & Son, Britannia Pottery, William-street, Hanley, are earthenware manufacturers who have laid themselves out specially to provide goods capable of meeting the needs of the million, and to do this their prices have, of course, been fixed within the reach of all. Their trade is of a widely miscellaneous character, and the variety of the articles they manufacture has, doubtless, had much to do with their extensive connection with the bazaars, who can find probably all the miscellanea they require in the productions of the Britannia Pottery. The firm has evidently found this miscellaneous type of business to best suit their needs, and have preferred to develop it, rather than embark upon the manufacture of specific services. There is probably a valid reason why their productions are out of the range of competition in the matter of price. They have such a demand for individual articles that they are able to give their workmen standing orders to make individual lines, thus securing the maximum advantages in the direction of production, and the marketing of the goods with a minimum of salesmanship. One would imagine that at the prices asked for them the majority of the goods will sell themselves ; certainly those



JOSEPH GRAY & SON.

engaged in the retailing of the cheaper lines are able to handle Gray & Son's productions in large volume, particularly in the home market. The productions of this pottery are of such a cosmopolitan type that it would be out of the question to attempt to specify even the bulk of them in a short notice of this description, but we may venture to enumerate a few of them. Such articles as lipped bowls, bakers, jugs, covered butters, bread trays, pastry bowls, lettered domestic jars, vegetable dishes, joke cups and saucers, fancy figures, and similar lines are amongst some of the most saleable. Earthenware teas and saucers sell in notable quantities, and may be had either plain or fluted, with supplementary articles, such as muffins, in the same shapes. A new " Paris " shape tea and saucer, of a very useful size, and having a deep saucer, is proving itself popular, and receives generally a gold band with two gold lines. In ornamentals and grotesque figures there is a wide assortment ; the animals include cats, dogs, horses, &c., and some of the models are specially well done, particularly the Scotch terrier. There is also a new line in Jester faces, a new Toby jug, and a a new snuff-taker. For some time the firm has been specially catering for a toilet trade, and they have some remarkably cheap lines in the five-piece set with open soap, and the six-piece set with covered soap, in

their "Naples" shape. This is supplied in different coloured shadings, and it may safely be said that it is amongst the cheapest lines on the market. Shaded and vellumed toilets with floral litho subjects are to be had in blue, pink, fawn, &c., on a tall slender shape known as the "Cairo," and the same shape can also be had with wide bands of different colours or gold band and lines round the centre of the pieces. The firm's toilet trade has developed extensively of late, and toilet ware is now



JOSEPH GRAY & SON.

shipped by them from the factory in truck loads, especially in the plain shaded. A wide trade is done also in mounted jugs, which can be had either plain or embossed, with the ordinary common metal mount, in pint, pint and a-half, and quart sizes. The "Lindsay" wheat embossed white earthenware enjoys a good run, and is made in jugs in four sizes from 24's to 42's, in teapots from 24's to 36's, in quart hot water jugs and quart coffee pots, either with pitcher or metal covers, and other lines. We illustrate a few pieces indicating readily selling lines; a catalogue and lists can be had from Gray & Son by application to the Britannia Pottery.

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.

Compagnie Française de l'Afrique Occidentale, 75, Whitworth-street, Manchester. Porcelain and earthenware. No claim is made to the exclusive use of the letters "F.A.O." The Arabic characters appearing on the mark represent "Compagnie F.A.O.," the phonetic rendering being "Kongbangyah Fao."



350,436.



350,437.

RUS. 350,585. All goods comprised in Class 16. Ravenhead Sanitary Pipe and Brick Co., Ltd., The Ravenhead Brick Works, Burtonhead-road, Ravenhead, St. Helens, Lancs.

"EXCELSIOR." 351,074. Fireclay goods included in Class 16. Johnson Fireclay Co., Ltd., Cliffe Vale, Stoke-on-Trent, Staffs.

Empire Notes.

Mr. J. Chaleyer, of J. Chaleyer & Co., 504-506, Collins-street, Melbourne, expects to arrive in England on a short business visit early in July.

An Australian Trade Inquiry.—A Melbourne firm is desirous of representing United Kingdom manufacturers of glassware and chinaware. Communications should be addressed to the Statistical and Information Department, London Chamber of Commerce, Oxford-court, Cannon-street, E.C., mentioning THE POTTERY GAZETTE.

Canadian Trade Inquiries.—The agency of a United Kingdom manufacturer of plate-glass windows and fancy glass is desired by a Canadian firm.——A Dominion firm desires the agency of United Kingdom manufacturers of glazed roofing and building tiles.——A firm, stated to have a large connection in Canada, desires agencies of United Kingdom firms manufacturing bottles, bottle capsules, and bottlers' machinery and supplies.——A Vancouver firm of importers and manufacturers' agents makes inquiry for the names of United Kingdom manufacturers of bricks and tiles. For further information, application should be made to the High Commissioner for Canada, 17, Victoria-street, S.W., mentioning THE POTTERY GAZETTE.

Proposed Australian Pottery.—With reference to the announcement in the "Board of Trade Journal" in January last relative to the formation of a company for the manufacture at Port Adelaide, South Australia, of bricks, firebricks, roofing and flooring tiles, white and coloured glazed tiles, insulators, sanitary ware, and all kinds of refractory goods, the Imperial Trade Correspondent at Adelaide (Mr. J. K. Samuel) reports that although the recent attempt to float the company publicly failed, the promoters have raised some capital privately, and are now making arrangements for the erection of the works. Mr. Samuel adds that it is probable that the industry will be started on a more modest scale than that originally contemplated. The address to which communications might be sent may be obtained by United Kingdom manufacturers of brick and pottery works plant on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., on mentioning THE POTTERY GAZETTE.

Canadian Duties on Bricks.—The Board of Trade have received a copy of a Bulletin (No. 658), dated May 13, 1913, cancelling the previous Bulletin of 1908, and, at the same time, notifying that the rates of duty leviable on fire and building bricks, &c., imported into the Dominion of Canada are as follows:—Fire brick (9 by $4\frac{1}{2}$ by $2\frac{1}{4}$ ins.) valued at over $19.50 per 1,000 at place of export, under the British preferential tariff free, under general tariff free; fire brick valued at $19.50 per 1,000 and less at place of export are held to be made in Canada and subject to duty under tariff item, $12\frac{1}{2}$ per cent. ad val., $22\frac{1}{2}$ per cent. ad val.; locomotive fire brick (arch blocks, fire box blocks, boiler tile) and fire-brick stove linings are made in Canada and rated for duty under tariff item, $12\frac{1}{2}$ per cent. ad val., $22\frac{1}{2}$ per cent. ad val.; fire-clay gas retorts, hollow shapes and hollow blocks, although made of fire clay, $12\frac{1}{2}$ per cent. ad val., $22\frac{1}{2}$ per cent. ad val. NOTE.—Importations of above described fire brick, as rated for duty under Tariff heading No. 282, are subject to special or dumping duty in cases where the true selling price (f.o.b. place of shipment) to the purchaser in Canada is more than $7\frac{1}{2}$ per cent. lower than the value of the same for duty purposes. One fire-brick $9\frac{1}{2}$ by $4\frac{1}{2}$ by 2 ins. weighs about 6 lbs. 13 ozs. The value of this fire brick when costing $19.50 per 1,000 at place of export is equal to about 29c. per 100 lbs.

THE POTTERY TRADES REQUIREMENTS EXHIBITION.

(BY OUR OWN REPRESENTATIVE.)

AN exhibition of quite an unique character, which may be said to have marked an epoch in the history of the pottery trades of this country, was held in the King's Hall, Town Hall, Stoke-on-Trent, from June 9 to 21. It was promoted by the Joint Committee of Pottery Manufacturers of Great Britain (Mr. Wm. Burton, M.A., F.C.S., chairman, and Mr. A. P. Llewellyn, secretary), with the approval of the Home Office, and under Royal patronage.

The exhibition in question merits special attention by reason of the fact that it is the first that has as yet been organised for the sole purpose of enabling manufacturers and operatives to elucidate problems connected with the recently adopted Home Office regulations, and to witness a very considerable item, these rules have been accepted by the manufacturers in a manner conclusive of their desire to conserve and improve the health of the operatives, and to secure for the industry as high a reputation in the matter of the health of the workers as it has gained for its manufactures, and it is peculiarly fitting, therefore, that this particular exhibition should have followed so quickly, and in the same building, on the heels of the now renowned pottery exhibition which was got together representative of the productions of the Staffordshire Potteries upon the recent visit to the district of their Majesties the King and Queen. It is also a matter of encouragement to note just here that the King and Queen graciously consented to become patrons of this later exhibition.

To give effect to the new regulations, even in a very general way, involves many problems of great difficulty and technicality. It was, therefore, a happy idea which



[*Photo. by F. Starkey, Stoke-on-Trent.*

THE PLATFORM GROUP AT THE OPENING CEREMONY.

The names reading from left to right are :—Miss Martindale (Superintending Lady Inspector) ; Mr. William Burton, M.A. ; Miss Anderson (Chief Lady Inspector of Factories) ; Mr. Ellis Griffith, K.C., M.P. ; Mr. J. H. Walmsley (Superintending Inspector) ; The Mayoress (Miss Geen) ; Sir Arthur Whitelegge (Chief Inspector of Factories) ; Mr. C. R. Pendock ; The Mayor of Stoke-on-Trent ; Mr. A. P. Llewellyn (Secretary of Joint Committee), reading.

machinery, appliances and methods calculated to enable them to conform to legislation with the greatest simplicity and efficiency.

Having for its object the improvement of the conditions and the health of the operatives, legislation has for some time past been busy, as everybody knows, and although for a number of years special rules have been in operation, the result of which has been to greatly minimise the risks of lead poisoning, it will be remembered that in consequence of the deliberations of a Departmental Committee of the Home Office, on which both employers and workpeople were represented, new regulations governing the manufacture and decoration of pottery have quite recently been put into force.

Quite regardless of expense, which in some cases will be resulted in the organisation of this exhibition. Success attended the venture by reason of the fact that not only did the manufacturers of machinery and plant suitable for giving effect to the rules send exhibits and display numerous appliances—some of them in operation—but in addition pottery manufacturers themselves lent plant, models, appliances and photographs showing methods which have already been put into effect in the attempt to deal with some of the difficult problems involved. It will thus be seen that the exhibition was of much wider interest, and much more definite in its character, than the usual type of trade exhibition. Its very function made it impossible for the management to organise it with any anticipation of profit, and the sole view of the promoters can safely be said to have been the better education of

manufacturers, their managers, foremen and workpeople generally in the various mechanical and other appliances and devices that have been invented for the improvement of workshop conditions generally. Whilst, therefore, it was specially interesting from the point of view of the manufacturer, it was not without real significance to the operatives themselves, though it is very questionable whether the latter were as keenly interested in it and attracted by it as they might have been expected to be.

It has already been mentioned that the exhibition received the approval of the Home Office, and this official recognition was proved by the presence of Mr. Ellis J. Griffith, K.C., M.P., Parliamentary Under-Secretary for Home Affairs, who accepted an invitation to perform the opening ceremony, at which the Mayor of Stoke-on-Trent, Alderman F. Geen, accompanied by the Mayoress, Miss Geen, presided over a large and representative gathering, including on the platform Sir Arthur Whitelegge (Chief Inspector of Factories, Home Office), Dr. T. M. Legge (Medical Inspector, Home Office), Mr. W. S. Smith (Chief Inspector of Dangerous Trades), Miss Anderson (Chief Lady Inspector), Miss Martindale (Supt. Lady Inspector), Mr. J. H. Walmsley (Supt. Inspector), Mr. C. R. Pendock (Inspector of Factories), Mr. J. C. Wedgwood, M.P., and numerous other gentlemen in official capacities.

The Mayor welcomed and introduced Mr. Ellis Griffith, congratulated the promoters of the exhibition upon its success, and commended to the careful inspection of the manufacturers the various exhibits designed to assist in the preservation of the health of the workpeople.

Mr. Ellis Griffith, in declaring the exhibition open, said that that must be a proud moment for Stoke-on-Trent. He had never seen a Town Hall put to such good purpose, because the object of that gathering and that undertaking was to devise such means as might be possible and practicable to safeguard the life and the health of those engaged in the staple industry of the locality. Referring to the course of legislation in respect to the potting trade, he mentioned that it was just twenty years ago since a predecessor of his in the office he now held came down to Stoke-on-Trent (Mr. George Russell, in 1894), to make a personal investigation as to the necessity for a new code of rules. As a consequence of that visit certain new rules were put into operation in that year, and again in 1898 more advanced regulations came into effect. As a result of those regulations the cases of reported lead poisoning decreased from 400 to 200, and from 200 to 100. Even then, however, the death rate from lead poisoning was not eliminated; it was persistent. New rules came into operation again in 1901-03, but he wanted to remind his audience particularly of the work of the Committee appointed in 1908, which sat for two long years to take evidence on these matters, and of which Sir Ernest Hatch was chairman. Upon that Committee there were also two gentlemen whom he now saw on the platform, Mr. Wm. Burton and Mr. Bernard Moore, distinguished experts such as Professor Harcourt and Dr. Reid; and the Home Office placed at the disposal of the Committee the best evidence it could, giving it the help of such gentlemen as Mr. E. A. R. Werner, Mr. Pendock, and Mr. Duckering. That Committee investigated the matter very carefully and heard a great mass of evidence. Their inquiry was supplemented by an investigation into the subject by Mr. Judge Ruegg, whom they would all know, and as a result a certain code of regulations was prepared, which was in advance of any code in the world so far as the potting industry was concerned. It must be a matter of pride to us in England that we were in advance of anything else, but it was because the industry had to conform to these regulations that they were met there that day. The speaker here paid a tribute to the untiring energy and skill of Mr. Wm. Burton, who had taken such a prominent part in the organisation of the exhibition, and he congratulated him also on his most excellent hand-book analysing the evils which the new rules sought to remedy. What was the best way of dealing with these regulations, and how best could they be observed in a practical and commonsense way? The answer to those questions was provided by the exhibition. He was sure the manufacturers, when they came and inspected the appliances, would admit that the regulations were not so oppressive, but that they were able to obey them in every particular. Referring to the three lectures which were announced to be delivered during the continuance of the exhibition, two by Mr. Burton and the other by Dr. Legge, he hoped that, as admission was free, the operatives would avail themselves of the opportunity. He further expressed the hope that it would be possible for the exhibits to be kept together for some time after the conclusion of the exhibition, and that an opportunity might be provided for testing and standardising some of the appliances, in order that manufacturers might not be obliged to incur serious expense in installing appliances which might afterwards be considered ineffective. He looked upon that exhibition as proving two things: first of all that the manufacturers were with the Home Office in their attempts to make the industry as safe as possible for those engaged in it; and, secondly, not only as an indication of their present goodwill, but as an assurance that in the future they (the manufacturers) would keep themselves abreast with the developments of the industry.

Mr. Wm. Burton proposed a vote of thanks to Mr. Ellis Griffith, and Mr. Bernard Moore seconded, Mr. J. C. Wedgwood, M.P., supporting. Mr. Ellis Griffith, responding, added that his visit was more an official than a private one, and was intended to show that the Home Secretary and the Home Office sympathised with the movement. He said he looked upon the exhibition as something more than an exhibition for a particular trade. He regarded it as a pioneer exhibition for other trades, and he thought they were taking part that day in a gathering and in a movement that would gather strength as time went by. Once that particular trade and industry had had its exhibition, he believed other trades and other industries would have their exhibitions, and he was sure that every industry in England was most anxious not only to conform to regulations, but to make the habits of their industry as healthy as possible to those engaged in it. He congratulated them, therefore, because he believed that that was but the beginning of a greater and a larger movement than that of which they were the pioneers that day.

Mr. H. J. Johnson moved a vote of thanks to the Mayor for presiding, and Mr. John Ridgway seconded, the Mayor acknowledging suitably.

The Exhibits.

The following account of the exhibits is given as far as possible in the numerical order of the stands:—

Mr. H. W. Teeton, Foundry Works, Hanley, who occupied Stand No. 1, showed a selection of electric appliances suitable to pottery work, including fans and vacuum cleaners, lamp shades and reflectors, switch-gear, portable electric appliances and heating specialities.

Teeton's, Ltd., Stafford-street, Hanley, at Stand No. 2, exhibited specialities in men's and women's overalls, headware, waterproof aprons, towels, liquid soap and other hygienic necessities, as well as a selection of dustless specialities.

Steele & Roberts, Basford, Stoke-on-Trent, had an

exhibit at Stand No. 3, which essayed to cover practically the whole range of potters' special attire necessitated by the new legislation, including placers' and dottlers' aprons and slops, of flax, moleskin and leather, suits and head coverings, and special factory clothing in wide variety.

The Seysell and Metallic Lava Asphalte Co., London, E.C., at Stand No. 4, showed their metallic lava asphaltes laid on boarding and on concrete, to comply with the regulations that the floors shall be impervious. The application of asphalte to a floor gutter, the dressing of an outlet and the lining of a water tank, came in for special attention.

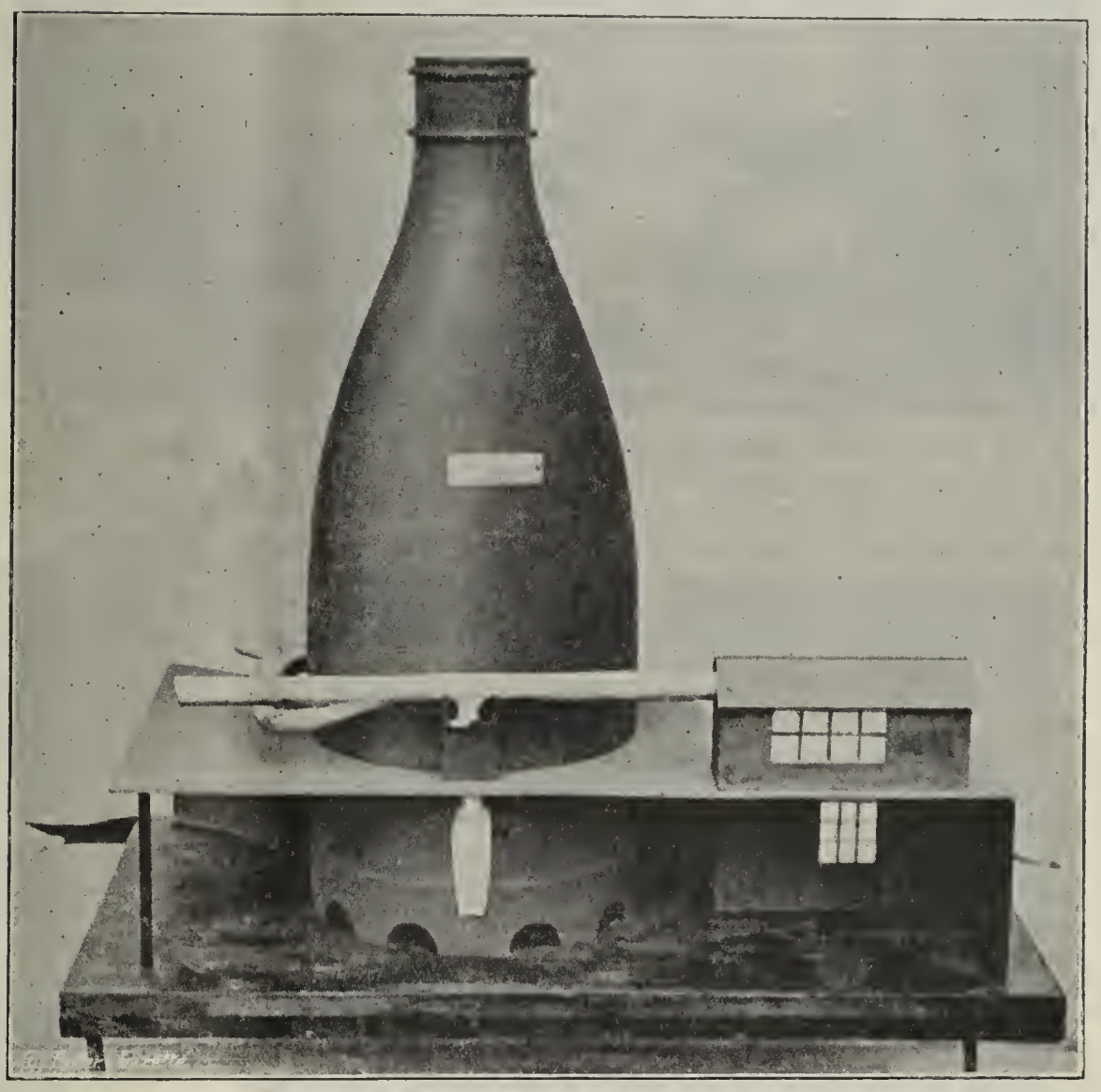
Wallach Bros., Finsbury-square, E.C., at Stand No. 5, showed a selection of respirators, head and face masks, goggles, gloves, first aid cases, whitewashing machines, washable paints, fire extinguishers, spraying machines and overalls.

The Linolite Flooring Co., Ltd., London, E.C., were showing, at Stand No. 6, fireproof, asbestos, jointless flooring, for laying on existing wooden floors in order to render them easily cleansable and impervious as directed by the new regulations.

Wengers, Ltd., Etruria, Stoke-on-Trent, had a particularly attractive show at Stand No. 7, and in their capacity as universal providers for the pottery and allied industries, exhibited a variety of respirators for both dust and acid workers, wet bulb thermometers for the workshops, dry bulb thermometers for testing the temperatures of the ovens before drawing, hygienic factory clothing, sodium sulphide as required for the lavatory accommodation of leadhouse workers, rubber gauntlets, gloves and various types of hand coverings, goggles for dust and acid workers, dippers' implements, crucible and muffle furnaces, and many sundry utensils and requisites required by the recent legislation. Last but not least, their enamels and underglaze colours, majolica glazes and stains, were shown to advantage on actual specimens of wares, set out to marked advantage.

Mr. T. Hulme, New Hall-street, Hanley, who occupied Stand No. 9, was showing the well-known Holdcroft thermoscope firing trials, as well as samples of plaster, transfer sheets, presscloths, overalls, towels, vegetable stains, underglaze colours and flannel.

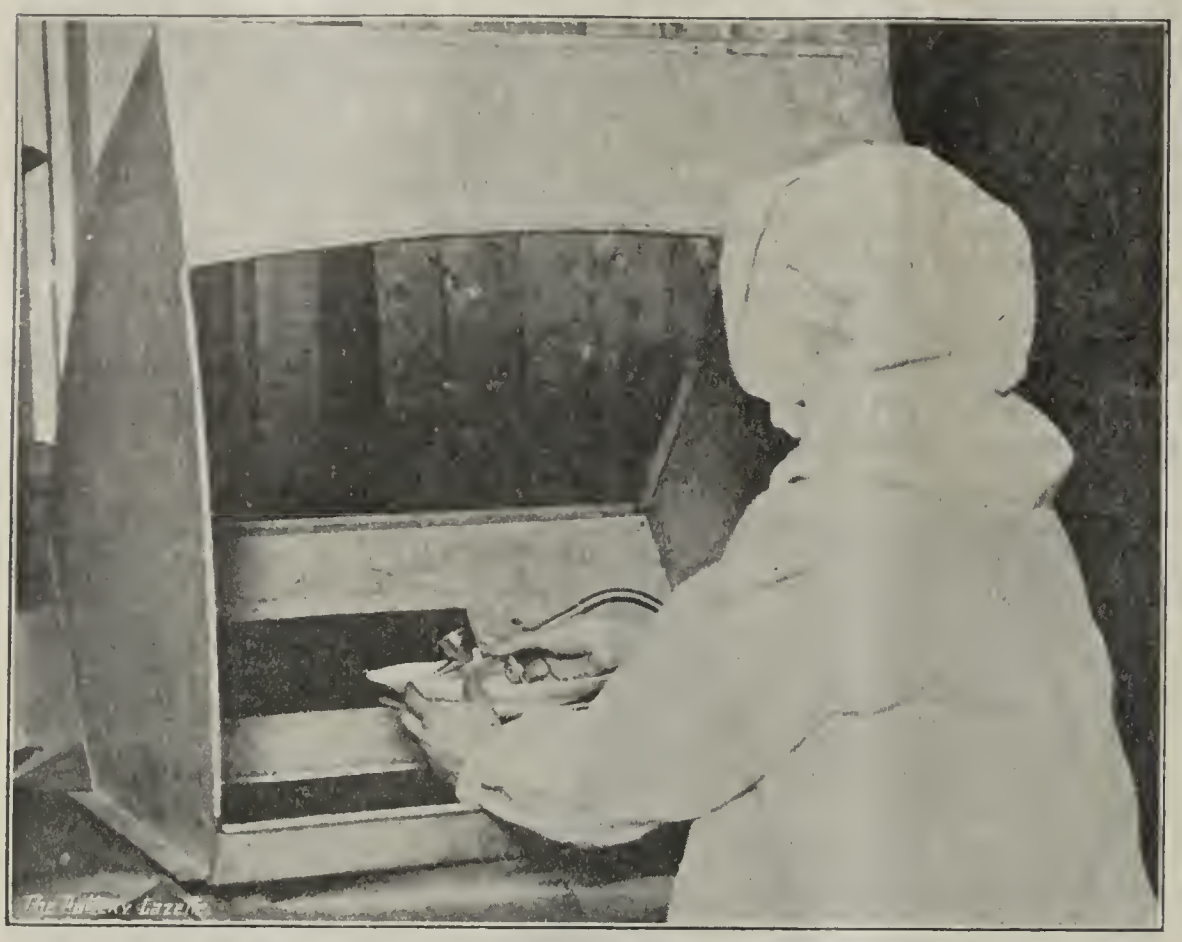
Thos. Willett & Co., Victoria Foundry, Burslem, had an exhibit at Stand No. 10, which at once attracted all comers. It was in the form of a model vertical dippers' drying tower, some 15 ft. high, worked with an electric motor. It took the form of an upright shaft, with a worm at the top driving a gearing wheel at a very slow speed, and giving just sufficient time for the dipper to fill one triangle board with his glazed ware before it left him, and another board was presented for him to fill. The construction is so devised as to overcome the difficulty of uncertainty in drying ware for the oven, and a noticeable improvement is in the shape of a specially constructed and patented reversible skeleton shelf, one side of which forms a rack upon which plates and similar articles are placed in a slanting position, and round which hot air passes freely. The reverse side of the shelf is flat, so that any articles of greater bulk may be placed with safety. Naturally the tower is full of moisture given off from the drying ware, and to obviate the passage of the ware through the moisture-laden atmosphere on its return journey round the tower towards the collecting side, a partition is constructed in the centre of the tower, which confines the moisture to the dipper's side, leaving the collecting side both hot and dry. The advantages claimed for it are economy in working space and building, reduction in loss through breakages, and consequently an improvement in the health and surroundings of the workpeople. It should not be overlooked that a fan is enclosed towards the foot of the tower, in order to take away the dry dust glaze from the boys who are engaged in taking off the dry ware on the collecting side. The peculiar construction and height of the tower alone made this exhibit an outstanding one of the exhibition.



MODEL OVEN-COOLING INSTALLATION: POTTERIES VENTILATING AND HEATING CO.

The Potteries Ventilating and Heating Co., Tunstall, at stands Nos. 11 and 16, amongst other important exhibits showed an oven cooling device, which is reported to have been already successfully installed at one of the Tunstall factories. We reproduce a photograph of this model. The appliance consists of an arrangement for blowing in cold air into the oven, in order to facilitate the drawing by bringing the oven more rapidly below the maximum temperature specified in the new rules. The general principle is to introduce the cold air at the clammings and other points of the oven, the draught being regulated by a motor and fan enclosed in a small house for the purpose, built adjacent to the oven. The arrangement is fitted to two ovens, and can be connected and disconnected at will, the draught being diverted from one oven to the other by means of a damper. A dust exhaust installation fitted to two types of tile presses, complete with a specially designed hood for the tile fettler, was also worthy of special notice.

This installation is designed to give an even velocity to the air at the point of entrance, irrespective of the relative distance to fan, specially designed guide-plates being adopted in order to prevent the formation of any currents. A combined fettler hood and table came in for the special attention of a number of the members of the Joint Committee, a tile press of Gosling and Gatensbury being utilised to show the arrangement. In connection with a dipping tower there was shown a ware cleaner's tray, in the centre of which was formed a grid with a downward draught. The grid was surrounded by water, and the heavy dust particles fall into the water, and are so placed out of danger. The lighter particles are drawn through the exhaust, and are collected below in a suitable receptacle. Specially constructed metal lockers for the reception of the outdoor clothes of lead-workers were shown, suitable to comply with the provisions of the regulations. These lockers, which are suitably ventilated, are fitted at the top with a special shelf to accommodate the worker's food, and below is hanging space for the clothes. This type of locker also came in for the commendation of several of the Home Office officials. A photograph of an aerographer's hood, made of galvanised steel, in preference to the usual wooden hood, deserves special mention. It is recognised, of course, that the colour used by an aerographer is more easily removable from a metal than a wooden surface, and on this ground the metal accessory should interest manufacturers. A new covered thimble riddle was included in the remaining exhibits of this firm, the whole of which it is quite impossible to mention individually.



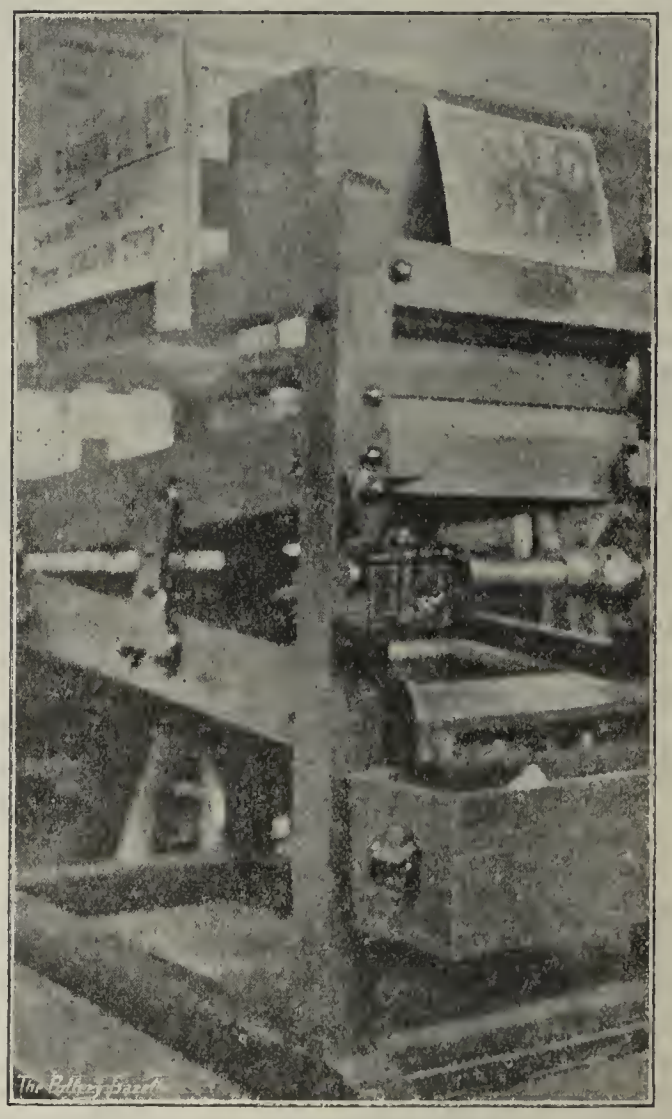
An Aerographer's Hood of Metal.
Potteries Ventilating & Heating Co.

Jame Keith, Blackman & Co., Ltd., London, E.C., had Stands Nos. 12 and 15, and showed a variety of appliances for heating, ventilating, and lighting, and their patent centrifugal steel plate fans, both directly coupled to electric motors, and of the pulley type for belt driving.

The Imperia Co., Ltd., Manchester, at Stands Nos. 13 and 14, exhibited vacuum dust removers. The Imperia steam ejector system was exhibited in an interesting manner, the special features consisting of an air-tight chamber fitted with a dust-retaining bag, and provided with an easy means of emptying, an automatic steam supply valve, and an economical steam ejector. Other types of vacuum dust extractors, for which special claims were made, were also demonstrated.

The Manor Engineering Co., Ltd., Fenton, showed at Stand No. 17 their power-driven board washing machine for the cleansing of potters' boards, which is claimed to be more efficient than hand-washing, and at the same time resulting in less wear and tear on the boards. This has already been noticed by us in a previous issue, and therefore needs no further description here. Their double-decker vibrating sifter, with six lawns, claimed to be practically noiseless, although most effective in operation, was also shown. The lawns are said to be easily cleansed, more durable than certain other types of sifters, and the appliance is said to be specially suitable for use with the electro-magnet. A notable point is that there is no iron to come into direct contact with the slip. The exhibit also included an assortment of spraying and lime-washing machines, and an engine-governor with automatic stop action, which is said to control readily the supply of steam, and in case of accident to the governor belts stop the engine.

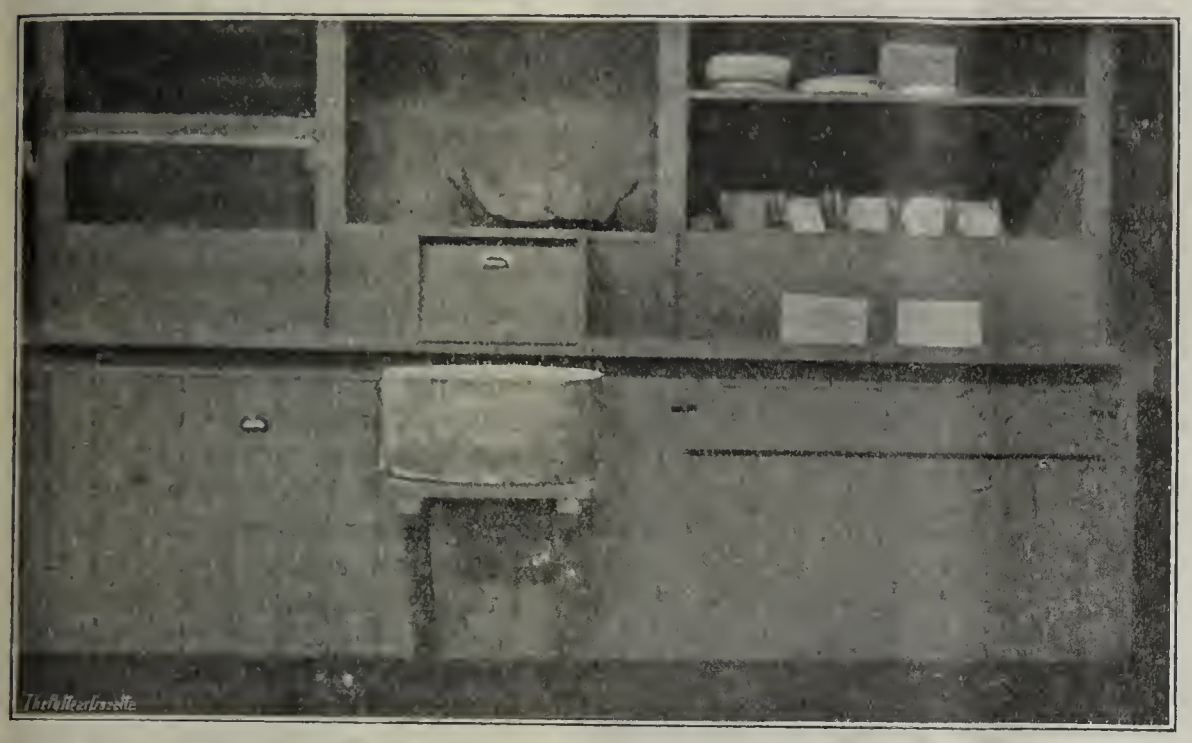
The Zephyr Ventilating Co., Ltd., Bristol, at Stands Nos. 19 and 26, had an exhibit comprising a selection of



[*Photo. by "The Pottery Gazette."*
Double-Decker Vibrating Sifter :
Manor Engineering Co., Ltd.

Pentarcomb specialities, as arranged for various processes in pottery work, and the different models were shown to be

capable of modification to suit the particular needs of purchasers. The different processes touched upon included ware cleaning, sorting processes, the brushing of biscuit ware, board washing, colour blowing, towing and



[*Photo. by "The Pottery Gazette."*

FLAT KNOCKING MACHINE: HARTLEY, CAUSTON & RICHMOND.

fettling, sifting, flat knocking, bedding and flinting, tile pressing, tile fettling, lead house processes, &c.

W. E. Browning & Co., London, E., occupied Stands Nos. 20 and 25, and showed a complete dust exhausting and collecting apparatus, illustrating their system of exhausting and collecting dust from flint placing benches and tile-making presses, for which many advantages were claimed.

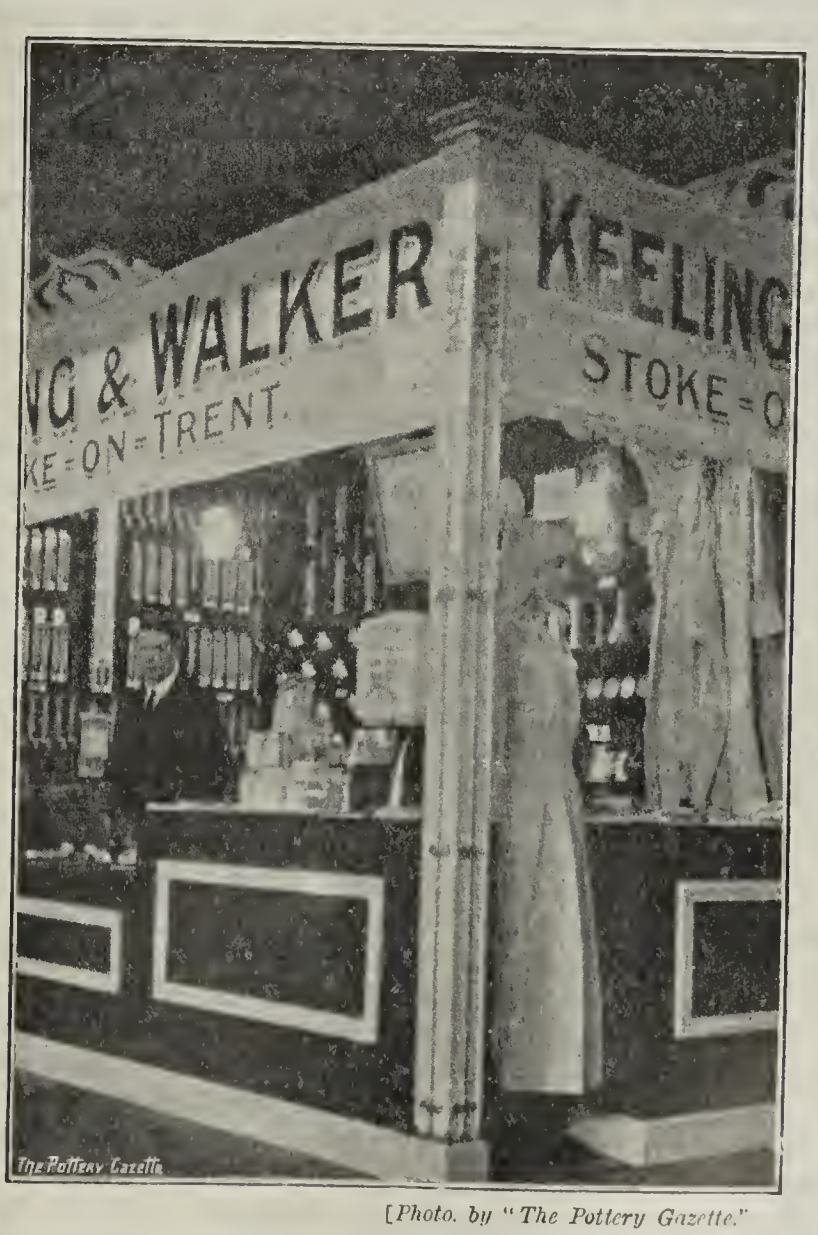
Hartley, Causton & Richmond, Ltd., Stoke-on-Trent, at Stand No. 22, exhibited a patent flat knocking machine in motion, and as it is of special interest to potters we reproduce a photograph of it. On account of the dusty nature of the process it was not practicable for it to be at work actually knocking flat, but it was possible to demonstrate the motion of the machine nevertheless. The machine embraces, as the photograph will show, arrangements for the saggars to be emptied under the influence of the fan draught. The ware is then placed in the knocking compartment; the flint is sieved, and falls into an ark underneath. At the other end is an arrangement for emptying the remainder of the flint out of the saggar, sieving it, and passing it also to the ark. Openings connected with the fan create a sufficient draught—about on a level with the operative's head—to collect any flint dust escaping past the lower exhaust openings.

The Birmingham and Midland Counties Val de Travers Paving Co. showed samples on Stand No. 23 of flooring material specially suitable for pottery work, as well as a number of models showing the application of impervious linings.

The Selas Lighting Co., Ltd., Manchester, gave a practical demonstration on Stand No. 27 of their system of lighting, and the illumination of the exhibition generally was undertaken by them by special arrangement with the Committee. The exhibit was a really capital one, and deserves more attention than we find it possible to give it.

Matthews & Yates, Ltd., Swinton, Manchester, at Stand No. 29, showed some capital exhaust appliances, fans and hoods, capable of dealing with all the dusty and dangerous processess connected with potting.

Keeling & Walker, Stoke-on-Trent, occupied Stand No. 30, and their exhibit was thoroughly representative of their specialities. We reproduce a photograph, which will give a fair idea of the articles with which it was mainly concerned. Amongst the most important items should be mentioned the capital showing of thermometers. A wet bulb thermometer in which a glass water pot is carried by a bracket clear of the mercury bulb, should be specially suitable for use in the clay drying shops. Another speciality in the form of an oven thermometer for reading the temperature of ovens before drawing seemed to have some very special claims. A magnetic needle inside the mercury tube is operated by the rising mercury, and remains in a fixed position until brought back by means of a magnet. It is thus a very suitable thermometer to be handed to a subordinate to register the temperature of an oven, and the manager, who may be at a distant part of the works, may thus feel safe in giving the word to commence drawing without actually visiting the oven himself. This particular thermometer is perforated at the base so as to allow the air to get through quickly in order to give a rapid registration. Unusually light respirators, made of aluminium, and having some specially good features, were included amongst other accessories. A demonstration was made on this stand of the effect of sodium sulphide in the washing of the lead worker's hands. A most important appliance ex-



[*Photo. by "The Pottery Gazette."*

KEELING & WALKER.

hibited by Keeling & Walker was in the form of an automatic liquid antiseptic soap fountain, which works on the principle of a bird fountain, the liquid soap always remain-

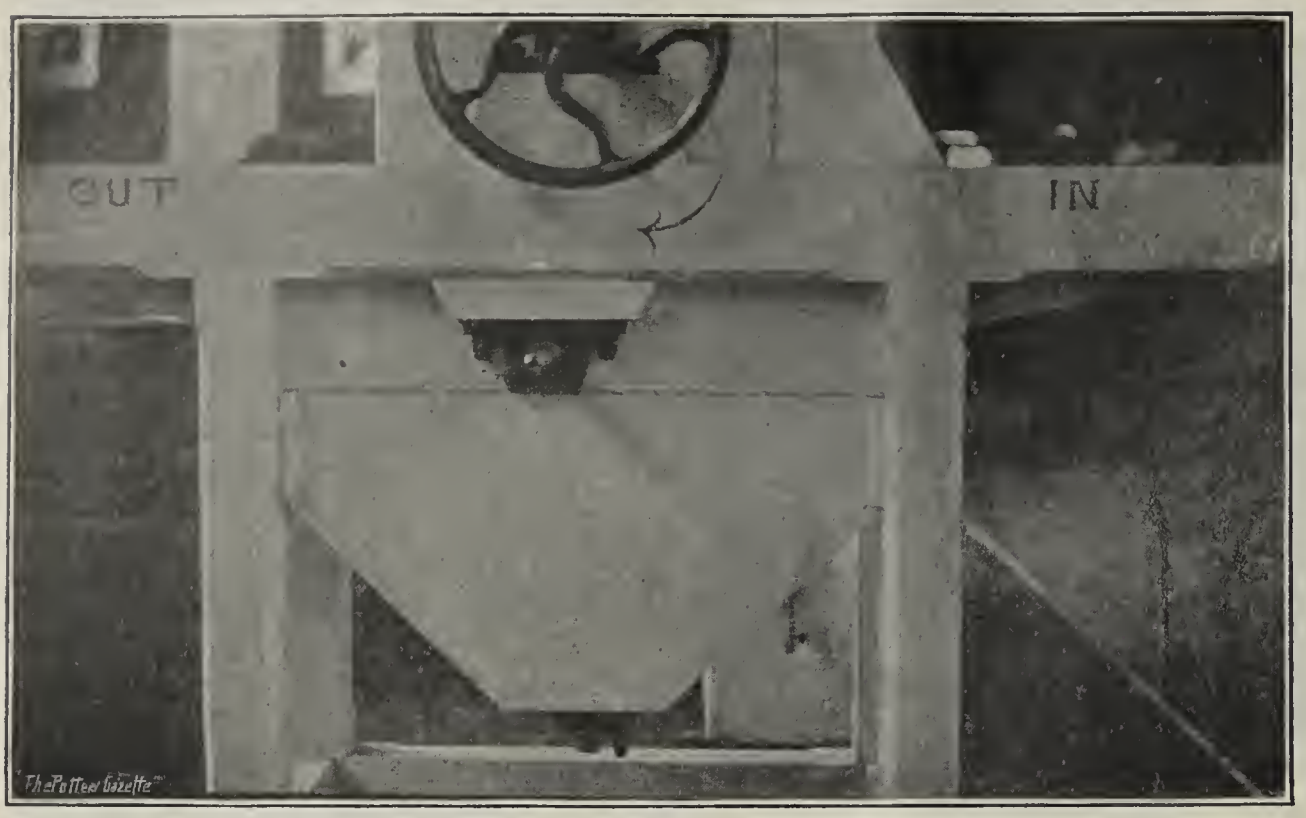
ing at a constant level. Manufacturers who know the difficulty of keeping soap on the lavatory slabs cannot fail to recognise the advantages of such an appliance. In overalls and aprons, both rubber and leather, there was ample choice. Seamless steel boxes for lead-house work, easily cleanable; whitewashing machines; and a host of other utensils fortified the exhibit. Finally, a very fine assortment of colours and glazes were represented on fired samples.

C. E. Ramsden & Co., Stoke-on-Trent, had the adjoining stand, No. 31, and showed stains and colours for all decorative purposes, impervious leadless enamels, frost and weatherproof glazes, claimed to be non-crazing and durable, gas furnaces, pyrometers, wet and dry bulb thermometers and other potters' requisites, including Fletcher Russell improved gas furnaces and Féry radiation pyrometer.

Mr. E. G. Wright, Guildford, Surrey, demonstrated on Stand No. 33 a patent chimney cowl and self-acting separate room ventilators; E. W. T. Mayer & Co., Burslem, at Stand No. 34, showed a collection of ware from leading manufacturers, produced by using their leadless flow powder, which dispenses with certain requirements under the new rules; Read and Shaw, Newcastle-under-Lyme, displayed at Stand No. 35 dustproof clothing for the use of the operatives; Jelly & Co., Leicester, at Stand No. 37 displayed ventilating and dust extracting apparatus; the Rapid Magnetting Co., Birmingham, at Stand No. 38, showed their patent "Rapid" electro-magnetic separator, as well as a smaller appliance suitable for treating glaze; John Wright & Co., Birmingham, at Stand No. 39, exhibited gas heated boilers; Brayshaw's (Stoke), Ltd., at Stand No. 40 showed a variety of sundries occupying a wide range from acetylene lamps to liners' wheels; and a few other exhibitors found a place subsequent to the opening of the exhibition, including the Sweepodust Co., Ltd., Southport, with an antiseptic fibre for dustless sweeping; the Bertrand Rhead Stationery Co., Hanley, with office labour-saving devices; and Rawlins & Co., Longton, with petrifying liquids and paints.

The only exhibits left to be mentioned now are those which were shown on Stands 21 and 24, arranged by the joint committee, and which included machines, apparatus, plans and photographs contributed by various firms who are members of the Joint Committee. These were extremely entertaining, and came in for the lion's share of attention. We propose to notice a few of them.

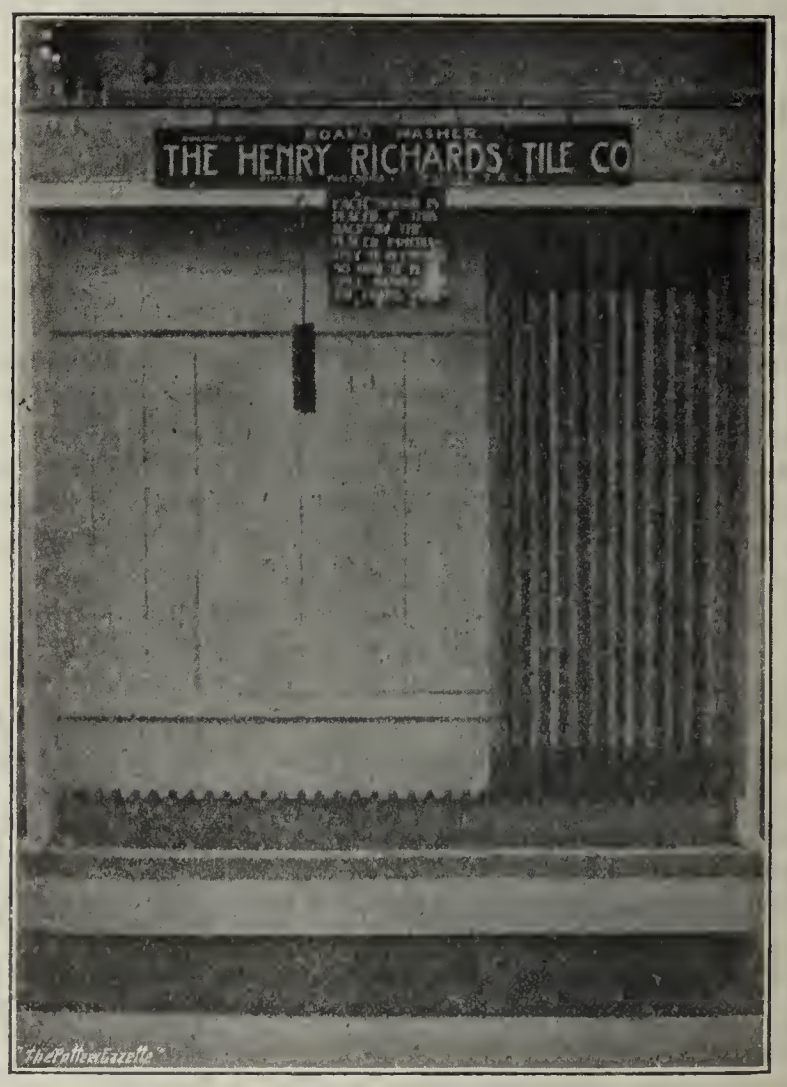
Johnson Bros., Ltd., Hanley, kindly lent a board washing machine, which we are pleased to be able to illustrate. Four machines similar to this have been in work at Johnson Bros.' factories since 1904, and are said to be giving satisfaction for both ribbed and plain boards. The ribbed boards can be passed through the machine with ribs facing either upwards or downwards. It will be noticed that the machine is fitted with revolving brushes which work at 200 revolutions per minute. The machine is capable of washing at the rate of 15 boards per minute, and only requires about half a horse-power to drive. Water is supplied through a lead pipe and spread over the upper surface of the board. This, with the aid of water splashed up by the bottom brush, keeps the top brush wet. The lower brush is running constantly in water, which is kept always at one level by an overflow, which should be connected to a small settling tank.



[*Photo. by "The Pottery Gazette."*

BOARD WASHING MACHINE: JOHNSON BROS., LTD.

Another board washing machine, of a very much simpler type, was lent by the Henry Richards Tile Co., and this, also, we reproduce. It will be seen that this consists of a simply constructed rack into which each board is placed by the placer immediately it is emptied. A falling spray



[*Photo. by "The Pottery Gazette."*

BOARD WASHING MACHINE: HENRY RICHARDS TILE CO.

at once wets the board, and the brush seen hanging at the top of the rack in a very convenient position is used to assist the water in cleaning the board. This exhibition was another proof that it is not always necessary to install an elaborate device to get adequate results.

A form of riddling machine, made by their own joiners, in order to comply with the regulation that the sweepings from the glost placing shops and benches shall be riddled in an enclosed machine before being sent on to the thimble pickers, was shown by H. & R. Johnson, and was considered to be a very good arrangement.

C. T. Maling & Sons, Ford Potteries, Newcastle-on-Tyne, kindly sent down a drawer which is used by them as a receptacle for the dust and scraps of their fettlers. The drawer is drawn out by the fettler on commencing to work, and as she stands over it, the scraps and dust fall into it, and the contents are removed at the end of each day. The firm also sent down a combination brush, or double squeegee, which they use for the cleaning of their cement floors, and which they claim is simpler and more effective than a vacuum cleaner for this particular purpose. A brass rod, it seems, is used as a handle for the brush, and this is made hollow in order to admit of the escape of the air. They also exhibited a novel chicken water fountain which they have combined with their wet and dry thermometers, so that it is not necessary to refill the water receptacle more than once a month. A point to be noticed in connection with it is that the woodwork is cut entirely away from the wet thermometer bulb, so as to allow plenty of circulation of air, and the thermometers are also protected by a wire screen. They have found this to be a very useful precaution, as previously their workpeople have been in the habit of breaking the thermometers by the dozen.

A number of diagrams and photographs of various sections of Pilkingtons' Tile and Pottery Co., Ltd.'s works at Clifton, helped to make the collective exhibit most entertaining. Other diagrams were kindly lent by Mr. Pendock, Inspector of Factories ; and John Tams, Ltd., Longton, loaned a very interesting hopper opening, which is suitable for placing anywhere in the walls of the workshops where there are no windows. It is provided with a perforated grating over the top. It was considered by a number of influential people who inspected it to be an admirable arrangement. Altogether, the collective exhibit was a very instructive one, and the firms who contributed to make it a success are to be commended for their generosity in enabling their contemporaries to take advantage of their models. One is inclined to think that the age of insularity, amongst the Staffordshire potters at any rate, has passed into the realm of the bygone.

The Lectures.

A very interesting feature in connection with the exhibition was the series of lectures delivered during its continuance. Of these two were given by Mr. Wm. Burton, and the other by Dr. T. M. Legge, H.M. Medical Inspector of Factories. Mr. Burton's lectures, which were both given at 4 o'clock in the afternoon, were attended particularly by manufacturers, for which they were specially interesting. Dr. Legge's lecture, which was primarily intended for the workpeople, took place in the evening, and, although there was a very fair attendance, one might have hoped that the hall would have been filled to its fullest capacity.

The first lecture, dealing with

"The Problems of the Potters' Shops,"

was dealt with by Mr. Burton in an easy, fluent, homely way, proving that he was thoroughly comfortable with his subject, and his audience was delighted with his handling of it. Dealing first with the principal regulations governing the work done in potters' shops, he pointed out that these were concerned with (1) ventilation; (2) the control of the temperature and the amount of humidity in the atmosphere of the working places—a subject related to ventilation, though somewhat distinct; and (3) the removal of clay or other mineral dust, wherever it was necessarily created in pottery manufacture. But there were, of course, other minor regulations, which were also of considerable though of lesser importance, i.e., the proper cleansing of floors and work benches—another branch of the dust problem—the lifting and carrying of weights, the disposal of clay scraps, and, finally, the storage of potters' moulds in workshops. All these problems demanded a most careful and systematic planning on the part of the manufacturer, his managers, or foremen, and not only so, but after a suitable plan for carrying out the regulations had been devised, it then remained for the manufacturer and his staff to see that the regulations were thoroughly observed. But he (the speaker) would certainly make a strong appeal to the operatives themselves, who would be the final sufferers should they do wrong, to see that the provisions that were made for the better conditions of the workshops were carried to fruition by the persons for whom they were primarily devised. No matter what regulations might be imposed, either by themselves or from outside, they would all be of very little avail in the absence of a spirit of cordial co-operation between employer and operative. Dealing with the point of efficient general ventilation, the lecturer proceeded to show how the regulations in this connection were of supreme importance in potting shops, because of two factors which coincided there, i.e., high temperature and humidity. These two conditions must always be in their minds in considering the ventilation of potting shops, because if the air was both hot and moist, then its removal from the breathing zone of the worker was of supremely vital importance. Stagnant air was a positive danger, and he, the lecturer, would avoid stagnant air as he would the plague. By the aid of the lantern Mr. Burton went on to describe how the ventilation of potters' shops should be carried out, and explained the operation of some ingenious hoppers giving efficient ventilation without draught. Right and wrong methods of accomplishing this were detailed. In many instances the desideratum could be obtained without recourse to expensive methods of artificial exhaust draughts, as, fortunately, the natural circumstances of the potters' shops came to their aid, and a number of these the lecturer described. A point that should be borne in mind, because it was a matter of pounds, shillings, and pence to manufacturers, was that it was often possible in potters' shops to so establish the direction of the air currents that the workshops could be ventilated and the clay ware dried by the same series of processes, and in many cases the natural method was the most efficient. When, however, one came to deal with that series of dusty processes connected with potting, such as tile pressing and towing and fettling, definite exhaust draughts, created by some kind of fan, and propelled by means of ducts and hoods, were absolutely essential, and to meet the necessities of such processes the lecturer went to considerable trouble to describe by means of the lantern correct and incorrect methods of duct constructions. Some of the slides were illustrative of difficulties which had been encountered and overcome in the effort to grapple with such problems at the lecturer's own works, and the illustrations included the various methods adopted right from the time that the dust problem began to engage the attention of the more progressive firms who anticipated the subsequent legislation, to the present day installations of considerable

ingenuity. Having devoted something like an hour to the consideration of the vital and important problems, the lecturer found it necessary to dispose of the minor issues, such as the cleansing of floors, &c., very briefly. He recommended the experiment of sweeping the floors of the clay shops with heavy petroleum residuals, and also the adoption of some form of vacuum cleaner system. Knowing what vacuum cleaning had done in other industries, he thought there was a definite future for it in the potteries. Finally, he would remind his audience that whatever changes took place in any industry devised primarily in order to benefit the health of the workers, although they had to be borne in the first place by the manufacturers themselves, they would eventually prove a good investment, firstly in the direct saving of waste in material and power, and no less surely, if more indirectly, in less loss of time through casual as well as serious sickness. From these points of view, if from no others, he commended to the consideration of the manufacturers the improvement of the health conditions of their potters and workpeople.

Mr. Burton's second lecture dealt with

"The Problems of the Lead Processes."

He explained that between the problems of the potters' shops and the problems of the lead processes there lay a whole group of intermediate problems, which were no less important and no less difficult to solve. These included the placing and emptying of china at the biscuit ovens, and other similar problems which appeared to be rather in the process of solution than finally solved, and he was perfectly sure that there they had one of the most difficult problems that ever faced a manufacturer. He proceeded to show the development of the different contrivances that had been devised in order to overcome the difficulties connected with china scouring, and he hoped that just as such simple and effective apparatus had overcome a potent danger in china scouring, such machines as that shown in the exhibition by Hartley, Causton & Richmond, Ltd., for dealing with the problems of flat knocking and fired flint sifting, might prove equally efficacious. One thing was certain, and although it was not really germane to the subject under review, yet it was far too important to be left unnoticed, the fine dust of flint used in china placing was exceedingly deleterious in its action on the human lungs, and it was one of the most important problems that still awaited its final solution. The lecturer, in calling attention to various appliances exhibited by manufacturers on the stand containing the collective exhibit of the Joint Committee of Manufacturers, specially referred to that of George Jones & Sons, Stoke-on-Trent, in the nature of a very elaborate drawing illustrating a plant which they have installed at great cost for dealing with the placing and emptying of saggars of ware which have to be bedded in flint. The Joint Committee had evidently been successful in calling forth a new spirit amongst manufacturers, and if they could only have more of this spirit, he would have the greatest confidence for the future success of the pottery trade of this country in every branch of its activities. Here they had an instance of a manufacturer who, at his own expense, and by the ingenuity of his own brains, or the brains of those whom he employed, had devised a special apparatus for dealing with a particularly difficult problem, and who was yet willing to exhibit to his fellow manufacturers what he had devised and proved to be a success on his own particular works. It was a happy augury for the future of the trade. Mr. Burton proceeded to deal very clearly with the necessity for the removal of dust from persons employed in the brushing of earthenware biscuit, and he explained the meaning of the somewhat lengthily worded regulation which was to govern the operation. He showed slides of arrangements which had proved thoroughly effective, and described what he considered to be an ideal system, involving the use of Pentarcomb distributors, for introducing the air in the upper part of the workshop, sending it upwards in a sort of fountain of spray, and allowing it to refresh and renew the general atmosphere of the room in its descent, exhausting the foul air near the floor level in order that it might carry any dust away from the workers at a level below the breathing zone. Dealing with lead poisoning, Mr. Burton explained how the views both of the laity and of professional men had changed during the last 25 years. They were first taught that it was due to lead being absorbed by the skin; afterwards they were taught that it was by digestion and by people eating their food with unwashed hands. That undoubtedly was a fertile method by which lead was admitted into the human system, and he would not attempt in the least to decry it. It was important that people should not eat their food with unwashed hands. It was equally important that dippers and glost placers should not be continually sucking at a dirty clay pipe, and taking it out of their mouths with their leaded fingers. But the most fruitful, the most dangerous, and, therefore, the most important to be guarded against of all the methods by which the human being became lead poisoned, was that of breathing into the lungs the impalpable dust of clay or colour compounds containing lead. It was for this reason that such a radical departure had been necessary in the new regulations. The lecturer proceeded to detail and to justify the regulations as they applied to dipping-house reform. Unfortunately in the Potteries they had inherited factories, workshops, and methods devised by their ancestors, and to bring them abreast with modern ideas and modern conditions of life would doubtless be difficult and also be costly. But it ought to be a service cheerfully performed if only for the reputation of the pottery industry of this country. Amongst the recent improvements which were to be inspected in this connection, the lecturer referred to the dippers' mangle of Thos. Willett & Co., Burslem, fitted with fans, one to dry the atmosphere, and the other to exhaust the dust from the boys taking away the dried ware, and the board-washing machines of Johnson Bros., Ltd., and the Henry Richards Tile Co. The latter showed that it was not only the most costly installation which secured efficiency. (Both these machines are already referred to and illustrated in the present article.) The lecturer concluded by referring to a number of minor problems in relation to the lead processes, and offered suggestions as to how these could be dealt with in order that they might make the lead departments of their factories as free from risk as he was sure they all wished them to be.

The third and last lecture, by Dr. T. M. Legge, on

"How to Keep Fit,"

constituted really a very homely talk to the operatives in regard to their food, the care of their teeth and bodies, and their responsibilities in the direction of making their conditions of work as good as it was possible for them to be. He firstly impressed upon them that, notwithstanding all the fans that were going to be put in, and all the open windows there were to be, he would still advise them to breathe through their noses and not through their mouths. The nose was the right channel to the lungs, the mouth being the channel for the use of the stomach. Any growth at the back of the throat which tended to stop development, to cause deafness, and to make everyone who had them a mouth-breather, ought to be removed. Then there was another point of great importance to consider, and that was the conscientiousness of the worker, who could

very often easily and deliberately create a dust which it was quite impossible for any fan to deal with. The habit of spitting in the workshops the lecturer strongly deprecated as a fruitful source of consumption. But the germ of consumption was not made in factories. It was brought there from outside. He did not believe that what was known as fibroid phthisis—the thickening of the lungs due to dust—killed by itself; the killing was done by the consumption germ coming in on top of that condition. He was anxious that they should not regard a consumptive fellow worker who observed the precaution of not spitting as a danger to his surrounding workers, and he was glad that the tuberculosis regulations of the Local Government Board laid it down strongly that no workman was to suffer any disability in gaining his livelihood by being a victim to consumption. The lecturer strongly urged the care of the teeth as being necessary to good health. He hoped they would not use, as in one case that he had heard of, the same brush for the teeth as for the hands. In regard to foods, he thought there was a good deal of ignorance as to the foods which contained the most nutritive elements, and he wished to point out that some of the cheapest foods contained just as much nutrition as the most expensive. It was important that they should choose the kind of food which provided the flesh-forming elements, and this could be secured with beans and peas or cheese just as well as it could be from meat. Out of comparatively cheap foods, such as salt fish and the cheaper cuts of meat, which were just as nutritious as the prime cuts, they obtained flesh-forming elements. Twenty pounds of cheese, for instance, contained just as much nutrition as the carcase of a sheep weighing 60 lbs. The early hot meal was very desirable, and the workers should not commence work on an empty stomach. The lecturer made a reference to the excessive use of alcohol, and described the effect which it had had upon animals. They had been fed for months on white lead without suffering at all, but any addition of alcohol to the white lead soon caused them to show symptoms, and they succumbed very much sooner than those which were not given the alcohol. Before concluding his lecture with some interesting slides of the bronze statues of Munier, the Belgian sculptor, Dr. Legge said that he trusted that overtime would be avoided by the manufacturers and the workpeople as much as possible, because the sickness rate was certain to go up if overtime were worked for any lengthy period. Finally he asked the workers to display an interest in their work, for this was the next great thing to enable them to keep fit. He had often said that he would infinitely rather work in their homely Potteries, notwithstanding the risks, than in the Lancashire cotton mills, where, through the din of machines, one could not hear oneself speak. Problems of health had been grappled with in other directions, an instance, to wit, being the construction of the Panama Canal, which many years ago had to be given up on account of yellow fever, which killed off the workmen like flies. To-day, however, the task was proceeding without the loss of a single life on that account, and they must take this as an augury of the success of the work they were going to do in the Potteries.

Imports into Azerbaijan (Persia) from Russia during the year 1911-12 included £3,367 worth of pottery and £12,791 worth of glassware. In each case an increase of over 100 per cent. is recorded, but there does not seem to be any opening for British exporters to cut into the market at present.

The Manufacture of China in Brazil.—The demand for chinaware is steadily increasing in Brazil, due to the increasing wealth of the country, the growing immigration of foreigners, and the general advance in the taste for the luxuries of life. As the import duty on these goods is very high, however, people are not able to buy as much as they wish. Now in Brazil there are many places where excellent kaoline earth is to be found, and more than once attempts have already been made to produce porcelain and chinaware in the country itself. At the end of the eighteenth century the chemist, José Manso Pereira, made two sets of table ware from kaoline obtained from Paquetá and Ilha do Governador, which were exhibited in Lisbon and attracted much attention. Brazilian-made porcelain is also shown in the Paulistan State Museum at Ipiranga. However, the industry has never been handled on a large scale, clearly because, so far, the conditions prevailing have not been favourable. Now (according to a contemporary appearing at Sao Paolo) an attempt is to be made to manufacture these goods at Rio Grande do Sul on a large scale. Under the auspices of the firm of Bromberg & Co., a joint stock company for the manufacture of china and porcelain ware has been formed at Porto Alegre with a capital of 250 contos of reis. The factory is to be erected at Rio Pardo, whilst the raw material will be obtained from the kaoline beds at Capivary. From that district kaoline has already been shipped in tons to Europe, where it has been spoken of in high terms as regards quality. Undoubtedly there is a growing demand for the products of the ceramic industry in Brazil, whilst the import duties are very high; still these elements of success are somewhat counterbalanced by the adverse factor of skilled labour, of which there is an absolute lack; hence the factory will, for some time at least, have to engage all their men in Europe.

Our Export Trade in China, Earthenware, and Glass.

For 1912.

FROM a Board of Trade Blue Book, published last month, we have extracted the following particulars showing the total value of Exports of China, Earthenware, and Glass, etc. (Manufactures of the United Kingdom), during 1912. (Further details will appear in our next issue.)

CHINAWARE OR PORCELAIN, AND EARTHENWARE, viz.:

Porcelain, chinaware, and parian	£176,146
Floor Tiles for tesselated pavement	72,521
All other Tiles (except roofing and street paving)	158,413
Sanitary ware	530,534
Electrical ware, door fittings, and chemical ware	45,384
Other Earthenware (including semi-porcelain and majolica)	1,847,267
Jet, rockingham, and glazed terra-cotta ware	8,530
Red pottery, stoneware, brown and yellow ware	313,586
Total of chinaware, &c.	£3,152,381

CLAY:—Unmanufactured:

China Clay	£745,822
Fire clay	41,609
Other sorts	61,905
Total of clay	£849,336

GLASS:—Plate	£393,461
Flint, plain, cut, or ornamented, and other manufactures of flint glass (except bottles)	298,056
Bottles	642,990
Manufactures (other sorts)	486,486
Total of Glass	£1,820,993

THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

(BY ONE OF OUR STAFF.)

(*Continued from page* 675.)

XV.—WILLIAM OWEN, LTD.

IF the circulation of THE POTTERY GAZETTE were confined merely to the British Isles, it might be unnecessary to commence a short article dealing with the china and glass department of William Owen, Ltd., by stating that this firm has extensive and commanding premises in Westbourne Grove, comprising a complete house-furnishing store of huge proportions, which, although having been established within the last forty years, has became an institution of prime importance not only in London, but throughout the whole of the United Kingdom. Nor is the trade of William Owen, Ltd., conserved to the British Isles alone; a good deal of their business is transacted with British Dominions overseas.

Probably their reputation was mainly gained in the rôle of family drapers, silk mercers, costumiers, milliners and tailors and outfitters, and so far as their china department is concerned, I think I should probably be right in saying, in view of the fact that it is only just entering upon the sixth year of its existence, that it is one of the most recently added departments of the company's business. One would not, however, in walking through the department, suspect that to be the case, and much credit is due to those who have been responsible for its organisation that in so short a time it has made itself felt to such an extent that it may now be classed as an important china department of the West End.

The whole store, as a matter of fact, is an illustration of rapid mercantile progress, and to-day, instead of finding William Owen, Ltd., the site of a single shop, as it once was—although we are now apt to forget it—we are brought face to face with a typical twentieth century establishment, which has responded to a tendency which one cannot deny has been specially noticeable in the West End of London, towards a concentration of departments representing almost every section of the furnishing trade under a single roof—an emporium, indeed.

It may have been due to the fact that we had heard of the progress of this youngest department of William Owen, Ltd., that I was commissioned to call and obtain some particulars in regard to it, and in doing so I was not disappointed. Mr. F. T. Cave, the manager of the department, received me courteously, and rendered me facilities of obtaining all the information I needed, as well as sanctioning the taking of the photograph here reproduced.



[*Photo. by "The Pottery Gazette."*

SECTION OF CHINA DEPARTMENT: WILLIAM OWEN, LIMITED.

The first thing that attracted my attention on entering the department was probably the character of the fittings, which are all of Australian wood, walnut stained. One is so accustomed to the ebony stained fittings of china and glass departments that it was quite a change to get amongst a little quiet colour. I could have wished on first entering the department that it were on the ground floor, and that there had been no necessity for the artificial light, but in common with most of the other metropolitan stores of like proportions the china and glass department is in the basement, along with its contemporary department, hardware. It, however, possesses one great advantage which many similar departments have not: in one section of the room at least there is a good supply of natural light from both the glass tiled pavement above and the staircase

leading thereto. As for the rest of the room, it is commendably illuminated, and nothing has been left undone in this direction to counterbalance the disability of working in the basement.

So far as the general arrangement of the stock is concerned I was agreeably impressed. Facility is evidently continually borne in mind, and the various articles are most systematically arranged. Tea and breakfast ware is principally confined to one side of the room, and dinner and toilet ware to the other, in short, there is a corner for everything.

In inspecting the dinnerware the patterns of which were comprehensive in their scope, I was pleased to see that one long table, which contained nothing but samples of dinner sets in stock, was carefully graded according to price, the cheapest being at one end and the very best and highest priced at the other, the intermediate patterns suggesting a process of evolution in price, thereby tending to save much of a customer's time, for under such an arrangement it is possible to pull up a customer at a point of the table where he or she can see at a glance services of the particular value required, as well as on either side services slightly higher or slightly lower in price, which may be chosen in preference. The majority of the services are displayed by a soup tureen, sauce tureen, coverdish, and two plates, 10 in. and 8 in.

In dinnerware, as in everything else, the company furnishes well-known makes, and they have seen the wisdom of running an open stock of patterns which they have proved to be successful, and of which they have obtained the control, many of these being included in a small catalogue issued exclusively by their china department. The "Beau" pattern, one of their specialities, is a green on-glaze printed design, a husk garland, and a lovers' knot, and this pattern was displayed in such a way that it could not help but come in for special prominence. A centre table of the real old willow pattern of Booths, Ltd., was set out in one of the best ways that a pattern of such a character and colour could possible be displayed, viz., on a white table-cloth, and the whole suite shown. It is often so very much more advantageous to be able to show a pattern in all the variety of the articles and shapes it embraces than to show merely a plate and coverdish, and rely on the customer's imagination of the rest of the pieces to effect a sale. Whilst, therefore, it is quite impossible to display everything en suite, it is certainly worth the experiment to try certain patterns in their turn displayed in this way. The result is generally satisfactory. Other noticeable patterns in dinnerware which I saw on show were Adderleys' "Delhi," Malings' "Maltese Lace," supplied either in green printed gold edge, or blue printed gold edge, and Booths' "Chinese Pheasant" pattern. There is also quite a good show of "Bisto," "Silicon" and Furnival patterns.

In toiletware a Sheraton design in blue and green of Maddock & Co.'s seemed to be a good seller, and it would appear to be the policy of William Owen, Ltd., that once they have proved a good selling line they should put it in open stock. They claim that they have a much better opportunity of selling toiletware by reason of the existence of their cabinet department than they could possibly hope to do without it. Certainly they have a very good show of toiletware, and, although situated right in the heart of a fashionable thoroughfare, they have ware of all prices to offer for the use of the bedroom.

In teaware it is noteworthy that the firm buys only English makes. At present they have found they can get all they need in this direction at home, and have consequently not looked abroad for it. They run some very good patterns in teaware, many of them in open stock, as in the case of the dinnerware, and amongst them the "Beau" design already referred to. The popular "Violet" pattern of Hammersleys' was one of them. Quite a speciality is made of morning and afternoon teasets on trays, some of them having a china tray and some a wicker one, the latter being made by the Soldiers' and Sailors' Guilds, thus indirectly assisting the charitable institutions. These particular sets are very suitable for presents, and being complete in themselves, although of small composition, they often find a customer who would possibly not be prepared to embark upon a forty-piece tea service or a fifty-one-piece breakfast service. But although the firm sells a lot of these small services for presents it is well to note that they have now got nicely into the swing with their stock lines, which will, of course, be the mainstay of their department.

In rich ornamental dessert and other services they are not behindhand, and amongst these was to be seen a beautifully hand-painted landscape dessert service of Hammersleys'; a case containing ornamentals of Crown Derby and Worcester makes; after-dinner coffees in satin-lined cases for presentation, amongst which Royal Crown Derby plays a very important part; loose coffees, rose-bowls, trinket sets, &c. Rose-bowls seem to be quite a speciality.

Foreign ornamentals were not neglected. One three-tier table was laid out with green glaze Flemish pottery, and some Austrian ware, shaded similar to the Worcester style, appeared to be very attractive at a moderate price, as well as some Austrian pierced fancies which are enjoying their second good season. A four-tier table of Japanese vases and ornaments should also be specially mentioned. A very important point to be noticed is that the general arrangement of the tables is frequently changed. No individual table escapes a periodical transformation, and the period is generally shorter than longer.

Glass ware has its own select little corner, and there is a choice variety of English cut-glass and some foreign ornamentals. Some white and gold glass of Venetian style, with a sort of basket pattern and flowers and foliage in gold, occupied a position of prominence.

After mentioning an excellent display of kitchen wares, which included almost everything necessary for the kitchen, even to a vegetable dish mounted on a spirit kettle, I will call the present article to a close by mentioning one thing with which I was particularly impressed at this store, and which has occurred to me on other occasions. In a department of this character where one finds a china department run in conjunction with other sections, the buyer often appears to reflect in the former an expert choice of colour and design which he doubtless obtains in dealing with fabrics, embroidery, cretonnes and carpets, and especially is this knowledge reflected in the purchasing of toiletware, which, naturally, in a complete house-furnishing concern has to be sold in conjunction with other bedroom fittings. I mention this merely in order to stimulate those who may have simply a china department to attend to, to make themselves familiar with the tendencies of the different definite periods and styles of furnishings, and in this way be able to hold their own in the trade. Reproductions are, as we all know, the order of the day, and as this is not only the case in regard to earthenware and china, but in relation also to tapestries and general fittings, it is by those who display intelligence in these matters, and who exhibit an all-round knowledge of styles and designs in general furnishings, that the better class trade in china and earthenware will eventually be won.

(*To be continued.*)

The Import of China Clay into Germany has risen from 2,800,000 dz. in 1911 to 1,200,000 dz. in 1912, the increased import from the United Kingdom amounting to 336,000 dz.

A FEW CHINA SHOPS IN SOUTH DEVON.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

THERE is, perhaps, no quarter of England which has come in for a greater share of attention and a fuller measure of well-deserved praise on account of its general picturesqueness of situation than "Glorious South Devon." It was, therefore, a delightful experience to be ordered thither in the early part of May in the capacity of commissioner for this Journal. To a Londoner or a North Countryman a visit to Devonshire never comes amiss, but there are times of the year when such a tour offers the maximum advantages, and during the month of May, when the natural beauties of English pastoral scenery, particularly in the South, are considerably enhanced by the early light green tints of spring, and everything either from the point of view of business or of pleasure seems to have caught the spirit of revival associated with the season, such a visit is positively delightful. Such was one's impression on skirting the coastline by Dawlish and Teignmouth in a fast express from the North of England in the direction of Torquay on a warm, sunny spring day. A ten hours' railway journey, which at one time would have been a feat of patience, but, to-day, is accomplished with a fair degree of comfort, was already forgotten. The black smoke of the industrial towns, with which one of my calling is more closely familiar, was, for a time, put out of mind, thus permitting the gloriousness of the surroundings to be embraced to the full, even to the exclusion of the fact that the visit was primarily, indeed exclusively, one of business. Even now, some time afterwards, as these notes are being penned, one's first impulse is to offer a tribute to the charms of Devon's landscapes and seascapes, which seem to vie with each other for priority, and which are captivating in the extreme. That I could satisfactorily accomplish this, were I permitted to do so, I am not sure; my duties, however, lie within narrower and prescribed limits, viz., to speak only of matters likely to be of interest to those engaged in the china and glass trades. My task is thus rendered so much easier, though at the same time one is at once robbed of a splendid opportunity to indulge in flights of oratory of the guide-book order.

For some time I was in doubt as to the most suitable centre from which to work, as some days must necessarily be expended in covering even the principal places in such an extensive area as South Devon. Whether this problem was ultimately decided from motives of facility or personal comfort, or both, I leave to the good judgment of others, but the choice fell in favour of Torquay, which, apart from its possession of lovely scenery, has the striking advantage of being in the centre of a number of seaside towns to which access is easy and cheap, whilst Torquay itself can boast of several china shops of a superior order and which deserve special notice.

TORQUAY.

Unlike many of the coast towns of Devonshire, Torquay has but little to offer in the realm of antiquity, its real history commencing with the opening of the last century, and that in consequence of its eminent suitability as a place of resort. It is, however, interesting to observe that amongst the few links with the past which have been discovered in the neighbourhood of the town are traces of a Roman pottery near the site of that of Watcombe, which will be referred to by us in a later issue. The growing popularity of the town as an ideal spot for recuperation is said to date back to the Napoleonic wars, after which the officers of the British warships which had been stationed in Torbay returned to purchase sites overlooking the bay for the purpose of erecting the villas which now stand out in marked contrast to the luxuriant foliage on the hillsides of the town and its suburbs. The advent of the railway towards the middle of the nineteenth century, the building of the pier and harbour in 1867, the subsequent embankment of the shore, the laying out of the drive from the Strand to Corbyn's Head, and the addition since of many attractive works, the most recent enterprise of which has been the construction of the Pavilion only a year or so ago, have all tended to draw visitors in greater numbers, until, to-day, Torquay offers unrivalled facilities to the tourist, and in consequence of an enthusiastic advertising campaign on the part of the South Devon Advertising Association and the Great Western Railway, the town promises to become increasingly popular and attractive in the years to come.

It is not surprising, therefore, that Torquay has not been behindhand in the quality of its shops, and one is pleased to be able to record that the china shops are comparable with perhaps those of any of the coast towns of the country. One sometimes finds on entering a seaside resort that the china trade, outside of souvenirs and cheap lines, is practically nil. This is certainly not the case in relation to Torquay, and I was agreeably impressed with a good deal which I was privileged to see there, though I was not altogether ignorant of the fact that some high-class goods are handled there, and that some of our oldest subscribers are situated in the district.

D. J. ALLAMS & SONS have two shops in Torquay, the one known as the "Rotunda," Torwood-street, and the other at 64, Union-street. The two businesses are kept quite distinct and separate, being worked respectively by the sons of the original proprietor, Mr. D. J. Allams, who, I regretted to learn, has for some years been incapacitated from business through ill-health, resulting in his retirement. Mr. S. J. Allams has charge of the "Rotunda" shop, and Mr. W. H. Allams of the shop in Union-street. The "Rotunda" branch has the advantage, doubtless, in the matter of position, and one would expect, therefore, that, if anything, a rather better trade is encountered there. It is situated in a historic part of the town on the site of the old market and post office and the situation is now generally known as the "Rotunda." The business at this shop was originally opened by a Mr. Wreyford. It was subsequently taken over by Jeboult & Son, of Exeter, and being sold by them, fell shortly afterwards into the hands of Mr. D. J. Allams, who, having come from Taunton to settle down in Torquay when the town was in a very primitive state, and when there was only a very indifferent system of water supply and a most unsatisfactory scheme of drainage, had founded the glass and china business in Union-street, which, as I have already said, is worked as a separate concern, but is, nevertheless, an integral part of the complete undertaking. If the founder of D. J. Allams & Sons could still have been in business he would probably be the oldest living tradesman in the town, for he is no less than 85 years of age. The "Rotunda" must be counted amongst the oldest china businesses in the West of England. It is only to be expected, therefore, that the proprietors hold a number of the principal agencies, and have a distinct reputation for handling the very best wares. The "Rotunda" shop presents quite an uncommon appearance, and its shape is implied by the name which has been assigned to it. Of semi-circular construction, of a single story, and having a flat roof, it offers one of the most unique frontages that I have ever seen in the trade, and its shape suggests some notable advantages in the matter of display; for instance, although a long and narrow shop, it has but the one room, the whole length of which is possessed of

windows down the one side, and there is also a double window and an entrance in Torwood-street. The peculiar shape of the shop and the most unusually fine window facilities make it possible to have a representation in the view of the passer-by of practically everything they handle; in fact, the window may well be regarded as constituting an important proportion of the shop, and some of the lines displayed therein occupy a more or less permanent position in the window, and are only removed as they are sold or renewed. The more expensive varieties of goods are naturally displayed mainly towards the main street, and the double window at the time of my call presented quite an imposing aspect. Coalport dessert services in mazarine blue and gold and apple green and gold with hand-painted groups, a line in which I understand Allams & Sons specialise, occupied a prominent position, along with a choice assortment of Royal Crown Derby, Royal Worcester, Royal Doulton, Copeland, Minton, Crown Staffordshire, "Crescent," and other high-class makes. Other features of the window show were "Silicon" dinner ware in a variety of patterns, and "Mason" designs in dinner and toilet ware, which still bear the hallmark of originality, despite their longevity. Cut glass wares, principally having their origin in Stourbridge, and including Webb, Walsh Walsh, and Fleming, were shown in charming variety, although—at least this was my impression—the china display held the balance. Two large handsome Arnhem vases stood out conspicuously amid a preponderating assortment of the best English makes, and the liberty of their design showed up in marked contrast to the conventionality of much that surrounded them. Neither they nor their neighbours, however, suffered by the contrast. It was simply a mark for the eye to rest upon in an altogether capital display. Passing down the room I halted here and there to admire the stock lines of a number of other well-known makes, and I formed the impression that these had all been discriminately chosen. Certainly the stock suggested the operation of a very judicious choice, and in this connection it should be pointed out that the business of D. J. Allams & Sons is but another illustration of the advisability of the principals of china and glass retail establishments taking pains to learn something of the inner workings of the trades in which they seek to deal. Mr. S. J. Allams was, I learned, at one time (some 35 or 40 years ago) associated with W. T. Copeland & Son at their retail establishment at 160, Old Bond-street, and there gained a practical experience in regard to ceramics. One is never surprised to hear of the success of a concern in which the partners are at home with their business, and there would probably be far less failures and much fewer complaints and growls if proprietors of businesses would extend to their sons whom they wish to follow them facilities for obtaining information on a wider scale than is possible to them within the confines of a small establishment which has already been made a success for them. But this is digression. At the extremity of the long room, having passed by assortments of lines from all the principal makers, including, it should not be overlooked, the specialities of the South Devon potteries—Watcombe, Aller Vale, and Longpark—one gradually comes to the commoner and everyday lines to meet domestic necessities, the cheaper toilet wares and culinary articles in French fireproof china and earthenware, of which there is an amply varied collection, capable of fulfilling practically all demands. The stock throughout is thoroughly representative, and whether one needs a fifteen or twenty guinea tea service, or a very cheap line for daily use in the kitchen, it can be obtained from Allams & Sons. The point that should be driven home in the present notes is that the trade at their respective shops is not principally and essentially of the class merely intended to appeal to the visitor. The resident member of the community finds it advantageous to deal with one or other of their shops, and can doubtless get quite as good value in Torquay as farther afield.

D. J. Allams & Sons' Union-street shop is of rather smaller proportions than the "Rotunda," but it well repaid my visit. It enjoys a capital stand, Union-street being one of the main thoroughfares on the direct route from Torquay to Newton, and well frequented. The double window front possesses a strikingly smart appearance, and I stood for some time studying the effect it created on the passer-by. I found Mr. W. H. Allams, who has charge



D. J. Allams & Sons' Union Street Shop.

of the branch, an exceedingly courteous gentleman, and he was not averse to giving me any information which I was inclined to seek. Since our last visit to South Devon was paid the front of this shop has undergone quite a transformation. Considered from some points of view I ought, perhaps, to have made my first call at the Union-street shop, for it was here that the original proprietor commenced his career in the town. The premises, like many others immediately adjoining them, were originally erected to serve the purpose of a private residence, and have since been converted to meet the exigencies of a growing business. A side passage has been taken in in order to construct a modernised frontage, and this must have been effected at very great expense. At least it has been done so well as to conceal all traces of the conversion, and anyone unaware of the transition through which the premises have passed would never suspect that they were originally built to serve any purpose than the one they now fulfil. The plate glass windows are of the very latest type, and they are fitted with glass shelves, screened off from the shop by means of sliding stained wood doors,

which render access to the window easy, and at the same time serve to keep the window goods quite self-contained. A handsome grey marble window support lends the outside appearance greater attractiveness, and the frontage is now one such as might be envied by many in the same line of business. Mr. Allams is certainly to be highly congratulated on the alterations which have been carried out within the last few years. There is no need to specify the character of the business done, as I have already referred to this in dealing with the "Rotunda." The one is practically a facsimile of the other so far as the quality of the goods is concerned. Similarly to "Rotunda" the Union-street shop is of one room, but this is sectionised, if I may so put it, in an imaginative way, the high-class decorative china and the cut glass occupying the prominence of the windows and the fixtures near to the approach, whilst the rear of the room is utilised for dinner and toilet ware and the cheaper classes of usable teaware. The arrangement is a well-considered one. As indicative of the prestige of the firm, it may be mentioned that Allams & Sons supplied the recently built Pavilion with part of its equipment of china, the selected pattern in dinner ware being Booths' mazarine blue band with gold edge and line, and in teaware Adderleys' Rose, Shamrock, and Thistle pattern, a number of white hooped sugars in Copelands' china also being supplied for the accommodation of Devonshire cream. I took the opportunity of questioning the principals of Allams & Sons as to trade prospects, as, of course, my visit really took place between the seasons, the winter trade of Torquay extending from November to the end of April, and the summer trade only commencing really with the opening of July. I learned that last year's trade had been a good one, in common with most other places, and as a result of the improvements which the town is witnessing, and the progressiveness of the Town Council in regard to advertising, which I have already referred to in the early part of the present notes, the local business people are looking forward to good times ahead. If Whitsuntide is to be taken as a criterion, it may be stated that Torquay is said to have accommodated more visitors at Whitsuntide this year than ever before. One thing I should certainly be glad to see when I next visit the place, and that is that a uniform closing day has been agreed upon. At the present time half the shops close on Saturdays and the remainder on Wednesdays, which is apt to lead to confusion. The market end of the town prefers to close on Wednesdays and the Torwood-street and Strand end on Saturdays, and in the case of Allams & Sons this leads to the one shop closing in the mid-week, and the other at the week-end, the half-holiday being determined by the practice of the locality in which the shops are situated. To myself this might not be a serious matter, but to the gentlemen of the road having samples to carry and a specified programme to work to, the arrangement is hardly a satisfactory one.

A photograph of Allams & Sons' Union-street shop will be found here reproduced. I was anxious, if possible, to be able to show both shops, but a snapshot of the "Rotunda" turned out unsatisfactory.

(*To be continued.*)

Glass Blowers in San Francisco were earning from $25 upward per week during 1912, according to a recent British Consular Report.

The Limoges Porcelain Industry.—The British Vice-Consul at Limoges reports:—The trade of this district has been a trifle better during 1912 than in the previous year. In the china works there was an output of 2,751 kilns fired showing a decrease of 105 on the previous year. The exports of china to the United States were valued at £287,894, a decrease of £29,533 on 1911.

Obituary.

M. LOUIS MARC EMANUEL SOLON, Aged 78.

WE very deeply regret to announce, on the eve of going to press, the death, at his residence, the Villas, Stoke-on-Trent, of M. Louis Marc Emanuel Solon, the world-renowned veteran ceramist, author, and connoisseur. Since the death of his wife some few years ago, to whom he was ardently devoted, the deceased gentleman has been noticed to be in very indifferent and declining health, and his age apparently bore heavily upon him, so that for some time past his relatives and friends have been prepared for the worst.



[*Photo. by Bentley Humphriss.*

MR. M. L. SOLON.

The late Mr. Solon was not only an artist of the first rank, but a man of culture, with a widely read mind. Born at Montauban, Garonne, France, in the year 1835, his early years were really devoted to a training which would befit him for a legal profession, but he showed pronounced inclinations in the direction of art, and an illness which overtook him had the effect of settling the question, fortunately for the ceramic art. As a young man, Mr. Solon became associated with M. Boisbaudrant, a professor of the Elementary School of Design in Paris, and devoted his energies to a study of decorative and applied art. He was for some time employed at the National Porcelain Factory at Sèvres

The Franco-Prussian war brought Mr. Solon to England, as he left Paris with a brother artist on the eve of its occupation by the invading army. He at once associated himself with the firm of Mintons, Ltd., and immediately applied himself to the famous pâte-sur-pâte (body on body) treatment, inspired by an ancient Chinese model in the Sèvres Museum. His long connection with the famous Stoke firm was severed in 1904, when he took advantage of a well-earned retirement.

Mr. Solon was a connoisseur of no mean order in relation to books and pottery, and his famous pottery collection, which brought enthusiasts from all parts of the world to attend the sale at Hanley towards the close of last year, showed the extent to which he prosecuted his hobbies. His library of books, dealing with ceramic subjects, numbering some 3,500 volumes, is still intact, and is thought to be the most complete collection of its kind in the world. Rumour has it that it is likely to be disposed of en bloc, and if that is so—there is no confirmation

of the report as yet—it is to be hoped that it will be secured by some institution in this country for the benefit of the ceramic industry. A considerable literary output was among Mr. Solon's many activities. His writings included "The Art of the Old English Potter," first published in 1883, "Salt Glaze," 1890; "Pottery Worship," 1897; "Old French Faïence" and "History of English Porcelain," both 1903; besides other books, pamphlets, and papers read before various learned societies.

The deceased was a Vice-President of the English Ceramic Society, and up to the time of his death fulfilled the office of Librarian to that body, during his connection with which he made many valuable contributions to the Society's "Transactions," the last appearing as recently as this year, and being a contribution towards a bibliography of the art of glass.

Mr. Solon leaves a family of nine, eight sons and a daughter, the latter having devotedly ministered to the needs of her father during his illness.

It is with very deep regret that we have to record the passing away of this distinguished personality in ceramic circles, and we feel that an important link has been severed by his demise.

MR. HARRY DUDSON, Aged 39.

THE death occurred on Tuesday, June 3, at his residence, Osborne House, Alsager, of Mr. Harry Dudson, youngest son of Mr. J. T. Dudson, Ivy House, Alsager, and a partner and director in the firm of Dudson Bros., Hope-street, Hanley. The deceased gentleman was one of the best-known and most popular young gentlemen of the district in which he lived, and prior to his being afflicted with a somewhat lengthy illness, was popular as a keen sportsman, being captain of the Alsager Cricket Club, a member of the Barthomley Golf Club, and secretary of the Alsager Golf Club, in connection with the formation of which he rendered much service. The latter office he held until his illness made it essential for him to relinquish it. He was connected also with the Alsager Tennis Club, and was altogether a favourite personality in recreative pursuits.



MR. H. DUDSON.

Some twelve months ago Mr. Dudson returned to Alsager from a sanatorium in Sussex, his stay there unfortunately having had but little effect, and though he was able to partake of gentle outdoor exercise until the last, his illness was brought to a climax on June 3, as mentioned, and he passed away leaving a widow and two children. The interment took place on Friday, June 6, at Christ Church, Alsager, when a muffled peal was rung in keeping with the sad event. Much sympathy goes out to his bereaved relatives, in which we ourselves join.

MR. WILLIAM GEORGE ROWLAND, Aged 44.

WE very much regret to announce the death, on June 2, of Mr. William George Rowland, of the firm of Wm. Rowland & Son, 68, Sandgate-road, and Bouverie-place, Folkestone, trading as The Folkestone China and Glass Stores. The deceased gentleman had been associated with the china and glass trades for over 25 years, and before opening out at Folkestone held some important positions in the principal metropolitan houses. He was a keen business man, of untiring energy, and made many friends. Besides being well versed in relation to modern productions, he was a connoisseur of the antique, and his wide experience enabled him to build up a good connection as the result of his enterprise in Folkestone. He was a generous subscriber to trade charities, and will be greatly missed. He leaves a widow, three daughters, and a son, to whom we extend our expressions of sympathy.



[*Photo. by Bright's Ltd., Bournemouth.*

MR. W. G. ROWLAND.

MR. JOHN T. CARTWRIGHT, Aged 48.

WE regret to hear of the death on May 29, after a short illness, of Mr. John T. Cartwright, President of the Cartwright Pottery Co., East Liverpool, and secretary-treasurer of the United States Potters' Association.

Mr. Cartwright, who came from a family of potters, thoroughly learned his business in the works of his father, William Cartwright, passing through subordinate positions one by one in order to get a thoroughly practical insight into the trade which he elected to follow. It was this kind of training which eminently fitted him to occupy the prominent positions which he was afterwards destined to fulfil. He was a thoroughly well-known personality, and, being amiable and charitably disposed, he earned the greatest respect amongst his colleagues, clients, and work-people.

The deceased was well known "on the road" in the States, and his demise has called forth expressions of deep regret.

The Glassware Export of Tréport and Eu declined from 6,929 tons in 1911 to 5,848 tons in 1912.

POTTERY AND GLASS AT THE GHENT EXHIBITION.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

IN reporting on an international exhibition such as that which is now being held at Ghent, it is possible to deal with the subject from various points of view. These exhibitions may be regarded as occasions for international intercourse, and the comparing of notes and marking of progress in social, artistic, and industrial matters. They may also be regarded as great fairs, where provision is made for the amusement of a large concourse of people, and a considerable business is done in the retail sale of articles, chiefly of a fancy and decorative description. Finally, and this is the most important function from our point of view, they may be regarded as affording opportunities for the display of samples and the initiating of business on a large and wholesale scale. The exhibition at Ghent, which was opened a few weeks ago, and is to remain open throughout the summer, may be looked upon as a fairly typical example of its kind. International intercourse is amply provided for in the huge Congress Hall and it is said that as many as 130 special congresses are being held. This feature, however, is not of particular interest to our readers, nor, we suppose, is the "Fun of the Fair," which, though not unduly prominent, has received ample attention. The usual side shows are kept distinct from the more serious sections of the exhibition, being located in the public park, which has been set apart for this purpose. Here there are plenty of "attractions," to use the exhibition authorities' own significant term, though it may seem to cast a slur upon the industrial exhibits. The park is connected with the exhibition grounds by a narrow road, which, after 6 p.m., when the main exhibition buildings close, is thronged with crowds of visitors hastening in search of entertainment.

Turning to the business aspects of the exhibition, we may say at once that the retail or bazaar traffic is far more prominent than the more important wholesale trade. At the time of my visit, early in June, the sections were all fairly complete, but there was still a good deal to be done in the way of erecting machinery and arranging some of the larger displays. Allowance for this must be made in perusing the following notes on the articles with which we are concerned in the various sections.

The BRITISH pavilion is a single-storey building, about 130 yards square, well placed on the left-hand side of a beautiful garden, immediately in front of the main entrance. There is a certain amount of British machinery on view, considerable quantities of crockery, and excellent displays sent by various Government Departments and the Society of Arts and Crafts. The last-named Society occupy a long gallery extending almost the whole length of the section, and the collection of decorative objects which they have assembled has been quite a revelation to many of our Continental friends who look upon the British Isles as a sort of artistic "Nazareth" whence nothing good can come. Ceramics, of course, are well represented in this art exhibit, the productions of Pilkingtons Tile and Pottery Co., Ltd., Mr. de Morgan, Mr. Howson Taylor, and Mr. Bernard Moore being much in evidence. Among the wares of the last named is one of really pathetic interest. It is a little grotesque rabbit which passed through the ordeal of the Brussels fire unscathed except that its lustrous red glaze was burnt to a dull brown, and it was imbedded in the molten glass from the roof. This relic, which is lent by Mrs. Wintour, is shown alongside a similar rabbit with the original colouring. We hope to make a more detailed reference to the ceramic part of the Society's exhibit in a later issue.

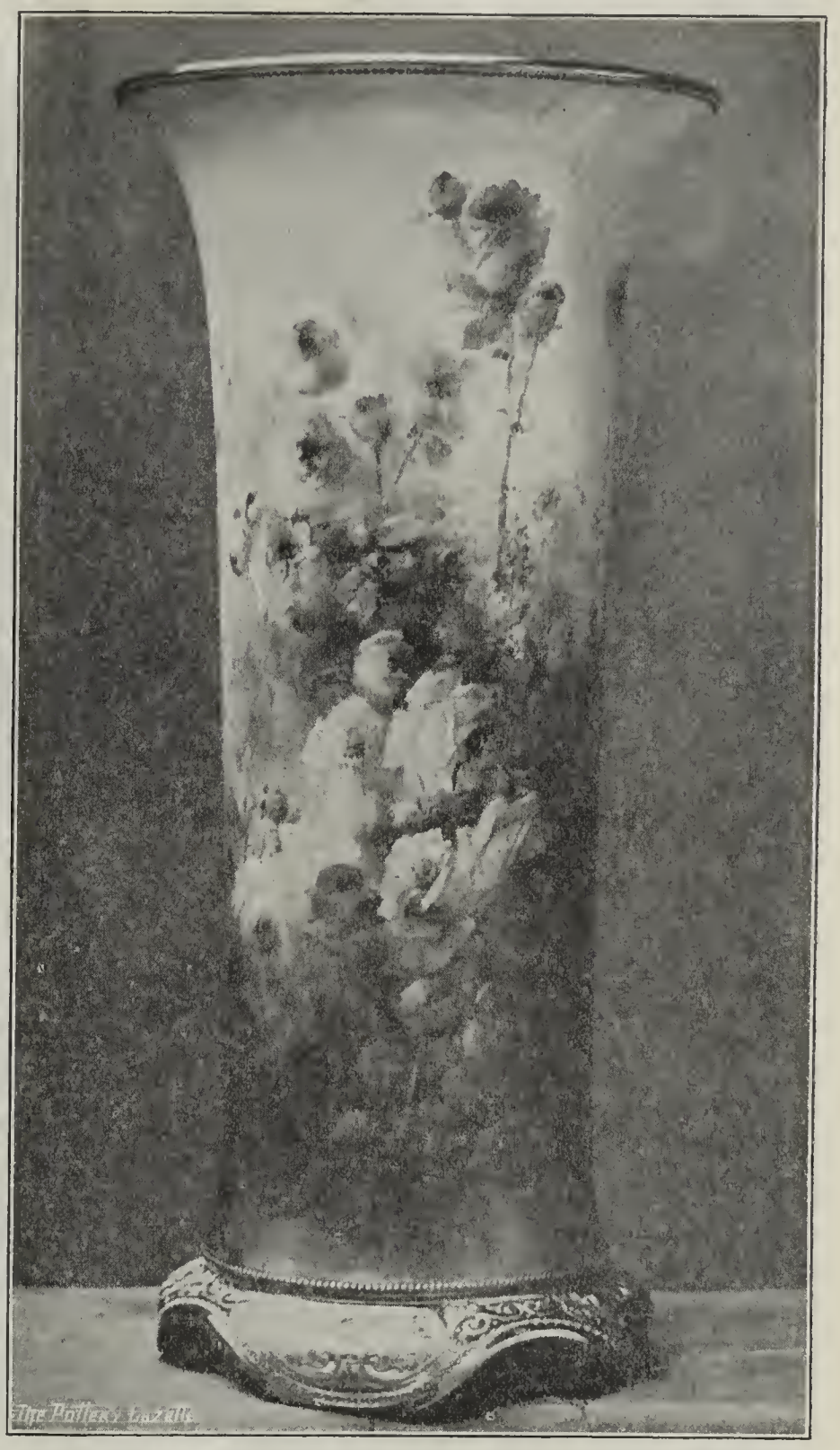


DOULTON & CO., LTD., LAMBETH.

The English pottery exhibits are by far the best collection of ceramic articles in the whole exhibition. Our pottery manufacturers also have the distinction of being the best represented industry in the British section. Their stands fill two spacious, well-lighted and tastefully decorated wings occupying almost the entire front of the section, and so placed that visitors approaching from the main entrance must needs pass them in order to reach the other British exhibits. Some idea of the general appearance may be gained from certain of the accompanying photographs, though most of them only show the ware set out at the works before it was sent to Ghent. The cases are of the usual type, and are well arranged, but some were not quite complete at the time of my visit. Moreover, the active representatives on the spot are continually and very wisely changing the arrangement of the wares in the various cases, so that the reader of this article must not expect to find things exactly as described therein when he makes his round of the exhibition. The British pottery is chiefly of a decorative character, ranging from small and dainty souvenirs to large and costly works of art intended for the connoisseur. The displays are evidently arranged

with the main idea of attracting a retail or a direct trade, rather than to obtain regular orders of everyday lines by showing samples. There are, however, several very good selections of such merchantable lines as table ware, toilet ware, &c., as the following brief descriptive notes will show. By way of preface to my remarks I must say that I describe the British pottery exhibits as I found them, and it is no fault of mine that so many reproductions have to be mentioned, as reproduction appears to be more popular than originality nowadays, and most manufacturers are content to cater for the prevailing fashion as they find it. So there is a general lack of novelty which renders the few exceptions all the more prominent. It will also be noted that somewhat similar goods are described in the exhibits of different firms. It is to be supposed that this is due to the fact that many manufacturers are equally quick to recognise and to provide for the public fancy in its latest phases.

Doulton & Co., Ltd., of Lambeth and Burslem, occupy a series of cases at the end of the wing near to the main entrance. The first which I noticed contained a selection of art vases from Lambeth comprising some excellent examples by Miss H. B. Barlow and Mr. Mark Marshall. The latter has executed a grotesque lizard which is quite a "tour de force." The pair of large and shapely flower pots, with curved handles, show off finely the flambé salt glaze with which they are coated. On three of the vases the decorations represent fairies among flowers, the curves of the slender forms contrasting well with the upright, slightly conventionalised flower stalks. Another striking Doulton vase is decorated with a "fox and grapes" design, the fox, yellow in colour, gazing upward at the festooned fruit, while a border of green vine leaves encircled the neck of the vase. The company's largest case contains some of their choicest Burslem productions in richly decorated ware, chiefly vases. The place of honour in the centre is given to a vase bearing on a medallion a magnificent Alpine scene, by Birbeck. On another is a Venetian view, strongly reminiscent of Turner, a typical example by J. H. Plant. Large roses very naturally depicted appear frequently as decorations, both on vases and plates. Some very choice blooms by Edward Raby are to be seen on the cylindrical vase, 2 ft. high, and slightly "flared" at the top, at the end of the case. This vase shows a very charming colour scheme through heliotrope and rose. Besides flowers, figures are also freely used for decoration, a classic instance being the "Circe" design, which has previously been described in this Gazette. Mention must also be made of the Oriental decorations, by H. Allen, the yellow stretches of sand, the white-walled buildings, and the picturesquely caparisoned Arabs being applied to various articles with excellent effect. A line that should be successful on the Continent is the rich coffee cups, which are to be seen in bleu de Sèvres, olive green, and other colours, lavishly embellished with gold. Doulton & Co., Ltd., also show some fine bowls and vases in Chinese and Japanese styles. A large portion of their exhibit is composed of flambé ware, which is attracting much attention. It is worthy of note that the designs on this ware appear to be much more distinct than formerly, and the colour is now as brilliant as it is possible to conceive. This is particularly the case with the black printed illustrations, which stand out very clearly. They depict homely scenes of farm life or sport, or such exotic themes as lions on the prowl at night and Arabs in the desert. A picturesque bowl represents an old woman carrying a bundle of sticks delineated in black upon a red ground, with a sunset indicated by a yellow gleam. Besides the flambé ware the crystalline glazes are well represented. On one lovely crystalline vase the artist, W. Hodkinson, has introduced very successfully the sinuous shiny bodies of several gold fish. Quite a masterpiece is a white crystalline jar having a frosty appearance over the whole of its body and fitted with a black lid and stand. Blue and red crystallines are also to be seen, and in one piece the crystalline glaze on the upper part passes into a red flambé on the lower. Space does not permit of a detailed description of many other very fine specimens exhibited by Doulton & Co., Ltd., of which we had taken note, but we are giving really high praise to this exhibit when we say that it is quite worthy



A Raby Vase: Doulton & Co., Ltd., Burslem.

of the best traditions of this famous firm, and cannot fail to enhance their reputation as one of the world's greatest and most progressive pottery manufacturing firms.

Gibson & Sons, Ltd., of Burslem, have retained three cases in which they have arrayed a variety of their manufactures. The firm is naturally associated with tea-pots, and a conspicuous item is a huge tea-pot with a capacity of 1,024 cups of tea. This is handsomely decorated, while the "knob" on the lid consists of another tea-pot of quite respectable size, richly gilt and having in turn upon its lid yet another small but perfectly modelled gilt pot. Tea-pots are also prominent in Gibson's other cases, together with coffee pots, butter dishes, biscuit barrels and similar

articles for table equipment. The ornamentation is varied, plain homely brown ware standing side by side with silver-glazed specimens on which one instinctively looks for the hall-marks. Judging by the difficulty of finding a tea-pot that pours properly in any of the tea rooms in Ghent we should imagine that Gibson's well-made articles would find a ready market. The company are, however, by no means limited to the manufacture of table utensils. They have also a case of vases, flower pots, bowls, &c., of a highly artistic character. On some appear the simple striped or spangled decorations generally



GIBSON & SONS, LTD. [*Photo. by Samson, Brussels.*

associated with their tea and coffee pots. But others bear floral sprays and festoons, and some really daring coloured effects are to be seen. On a centre vase wild roses are painted in delicate tints on a deep red ground. This design is also employed on the only toilet set shown, an elegantly shaped ewer and basin. Brightly plumaged parraquets, pheasants and peacocks, and gaily-clad dancing girls stand out vividly from their backgrounds. A conventionalised convolvulus design is applied both to useful and decorative ware, and a delicate green-grey water lily is another attractive floral theme. It is difficult to specify particular examples when the whole contents of these cases is of very real interest, but reference must be made to the manner in which the grouping of the subjects is made to harmonise with the contours of the ware to which they are applied. Good examples of this are seen in the drooping fuchsia sprays on a cake-stand, and the iris stalks on a deep blue upright vase.

Mr. W. H. Goss, of Stoke-on-Trent, has an octagonal case in which his famous badge ware predominates. The shapes, as usual, are revivals of those of quaint old utensils, and the number of crests upon the badges shows how widely the badge ware has become spread over almost all European countries. Besides the badge ware, however, is also a plentiful sprinkling of separate little figures—a crossing-sweeper, a Lady Godiva, and so on. Busts are shown of King Edward the Peace-maker and of King George. A Goss memorial mug bears a likeness of the Founder of the business in bold relief. Among other knicknacks which I noticed are a little Toby jug, models of the Lincoln imp and other gargoyles, small model houses, a cannon, and grotesque door knockers, a brown and ivory skull with the motto "Alas, poor Yorick," a Roman lamp, a nautilus shell, and a drinking horn from Winchester Castle. A large platter with his coat of arms in the middle bears the motto of William of Wykeham, Bishop of Winchester, A.D. 1367–1404, "Manners maketh man." It has been my privilege to see many collections of Goss ware, but that which is shown at Ghent is the most complete that has as yet come under my notice.

A. J. Wilkinson, Ltd., of Burslem, are making a prominent display of their "Oriflamme" ware, which is characterised by richly-coloured glazes applied to vases, bowls, &c., of classic shapes. The distinctive colouring of the glazes recalls that of the famous and precious blue John spar which is mined in Derbyshire, and is highly prized both on account of its rarity and its beauty. The predominant colour is a deep blue, verging on purple, but shading off into lighter tints and sometimes combined with stripes, streaks or blotches of a tawny yellow. Some pieces are of a delicate yellow or mauve hue throughout. A feature of all this ware is the high coppery lustre of the interior. Since the "Oriflamme" was shown at the Turin Exhibition (where, by the way, the company were awarded a Diploma of Honour), these goods have been in great demand.

Tooth & Co., Ltd., of Bretby Art Pottery, Woodville, are making a fine and comprehensive show, their exhibit being contained in one large octagonal and four museum cases, comprising a most varied collection of goods, including some choice examples of Rouge Flammé, some of which are relieved, under the glaze, with ideal tapestry and conventional ornamentation, quite unique pieces being different in treatment to anything we have seen; the variation in tone of colour between the background and the ornament being decisive and yet in perfect harmony, the effect showing extremely clever manipulation, and the result being most pleasing and gratifying. A notable feature is the reproduction of Japanese jardinieres

with a surface that has the appearance of lacquer. Another clever imitation is that of bronze bowls with handles and mounts complete, having a genuinely metallic appearance and the colour of a nearly new penny. Some vases and bowls in this ware might easily be supposed to have been made of hammered metal. Ivory and cloisonné effects are also very well reproduced, some characteristic statuettes and busts of Dickens, Shakespeare, Scott and Burns, with an old ivory finish, being worthy of note. Big Bretby granite ware vases are to be seen in simple but impressive shapes. One or two examples are shown of the Bretby toilet ware mentioned, and illustrated in a recent issue of this GAZETTE. Among the basket-work bowls is a series of diminishing sizes, made to nest one within the other. The animal figures for which this firm are noted are well in evidence, especially the vigorously executed model elephants.



TOOTH & CO., LTD.

The exhibit of THE ASHBY POTTERS' GUILD, of Woodville, near Burton-on-Trent, is entirely decorative in character, comprising quaintly shaped bowls and vases,



THE ASHBY POTTERS GUILD.

which are meeting with a good demand. They show some fine blue lustres and crystalline glazes, one lovely crystalline blue vase having a wonderful yellow under-glow effect. Another tall stoppered jar of pleasing shape was decorated with a deep blue crystalline glaze. There were also specimens in Rouge Flambé and ruby lustres, in which some nice plaques are particularly conspicuous. This firm had received the distinction of selling a specimen of their crystalline glaze to the Copenhagen Museum.

PILKINGTONS' TILE AND POTTERY CO., LTD., of Clifton Junction, near Manchester, are again to the fore with their magnificent lustre wares, the glazes in many instances having the highest possible finish. The articles shown are of a decorative character, and very highly decorated they are. The colouring which predominates is a combination of golden lustre with cobalt blue, and in these colours many appropriate figures are wrought out. Heraldic birds and animals march in procession around many bowls and vases. On others appear more natural figures, notably graceful herds of deer. Elsewhere classic figures tread the stately measure of a solemn dance. The lithe leopard and the massive bull also bring their beauty and strength to the designer's aid. To note particularly any special piece appears invidious, but a three-handled amphora-shaped vase on which appear a group of classic figures with a precisely similar vase among them certainly appealed very strongly to me. Another notable vase typified "Manchester" by a seated female wearing a crenellated crown and bearing a distaff, while a ship appears in the background. A splendid dish bore a high-pooped vessel in full sail with the motto "In solo Deo salus." One large case is devoted by

this company to the display of special vases with crystalline glazes. The shapes are simple, but the colouring is truly resplendent, the science and skill of the potter having roproduced and even surpassed the beauties of the famous precious stones that adorn the gates of the Celestial City of the Apocalypse. Agate and turquoise, jade and chalcedony, cornelian and lapis-lazuli all appear here as literal gems of art, the scientist having rivalled in his kilns the wondrous work of the primeval fires which formed the jewels in the depths of the earth. Many of these pieces are already marked as "Sold," and this is not surprising, for no person of taste could gaze upon them for long without desiring to become the possessor of a specimen of these highest modern types of the potter's art.

Wm. Adams & Co., of Tunstall, show their celebrated jasper ware in dark and light blue shades, and also in a delicate green tint. Classic decorations are applied to this ware and also to the black basalt vases and mugs. The black jasper, combined with white, forms a very effective contrast. Besides the classic subjects there is a bust of Shakespeare and a model of his house produced in this ware; but is Shakespeare not now also among the classics? Another case contains reproductions of old Chinese styles made by this firm. There are some excellent pieces decorated in a fine scale blue, with floral panels and rich mounts. Yet another branch of the productions of this versatile firm is their "Dickens ware," which is represented by a great variety of jars, plaques, candlesticks, ash trays, &c.

Mr. James Kent, of Longton, occupies one stand with blue and white china of the old Foley pattern. This, unfortunately, was only being unpacked at the time when I made my round.

The New Chelsea Porcelain Co., of Longton, reproduce antique Chinese decorations, and repeat some old-fashioned chap-book prints in early styles, the "dairymaids and shepherds" being a typical instance.

Mr. Bernard Moore, of Stoke-on-Trent, surpasses all his previous efforts in displaying his wonderful fancy glazes which are so eminently suitable for exhibition purposes. His many cases contain numerous pieces, each of which might inspire a separate paragraph, but only a passing reference can here be made to a few of the most striking examples. In the red flambés, notable examples are the "Britannia" bowl with ships under sail and smoking pottery kilns, the "Arabian Nights" bowl with a felucca-rigged ship, the domes, flat roofs and minarets of an Eastern city and a weird djinn floating above. The "Witches' Frolic" appears on several pieces, fantastic



William Adams & Co. [*Photo. by Samson, Brussels.*

red figures flitting across a dull gold background, lit by a pallid moon. Another vigorously executed theme which is freely used has flying owls above and fleeing mice below. The "Passing of Venus" bowl is of a more formal and classic type, but the grouping of the figures is singularly graceful. A gigantic candlestick fashioned after an antique Dutch pattern is adorned with figures of upward whirling Fire-Fiends. The "Storm" bowl depicts a monstrous red dragon above, whose baleful breath is sorely troubling a devoted bark below. Indeed ships, especially the picturesque oared galleys with high, carved prows, are very favourite themes, being wrought in various colours on numerous articles. Bats, dragons, fish and monkeys are also freely employed. The crystalline and peach bloom glazes are as prominent as ever, most of them having no other decoration than their own remarkable mottled,

grained and frosted surfaces. One deep cobalt blue vase forms an admirable background for a design representing bats flying by night. Mr. Moore has also a perfect menagerie of lifelike and grotesque elephants, frogs, monkeys, pigs and even a little rhinoceros, all these being greatly in demand among "flâneurs" seeking for souvenirs. This exhibit is "Hors Concours," as Mr. Moore has been appointed President of the Adjudication Committee.



MR. BERNARD MOORE. [*Photo. by Samson, Brussels.*

MINTONS, LTD., Stoke-on-Trent, have installed a choice collection of their highly artistic productions in two cases to the right of the main entrance. We are able to illustrate a representative section of this exhibit from a photograph taken at the works. Besides the pieces shown in the illustration, which speak eloquently for themselves, we would make special mention of a superb casket on which is reproduced the famous picture "La Rixe."



MINTON'S, LTD.

This stands on a gilt pediment in the centre of one of the cases and certainly deserves the prominent position which it occupies. On other handsome vases are magnificent hand-painted portraits and scenes, the grounds being

richly coloured and the mountings lavishly gilt. Vienna and Sèvres styles of decoration are both represented. The specimen plates comprise some of the best productions in a line in which this firm is pre-eminent. Some depict fish and game, others are plain white and gold or white and blue and gold, the body being of the finest, the glazes of the purest, and the finish of the highest possible workmanship. For daintiness and general attractive qualities, we took special note of the plate shown in the lower row of the illustration, representing two children skating near a danger board. The rim of this plate is perforated and delicately gilt. The next plate in the illustration with a Cupid in the centre, and a broad gold rim bearing floral panels, is also an admirable example of the potters' art. The illustration shows a few pieces of the classic pâte-sur-pâte ware of Mr. Solon. Medallions of this style of decoration, representing Venuses and Cupids and other classic themes, are mounted on vases, plates and plaques. Many other pieces, especially some of the pierced ware, merit special description, but I have only space to refer to the vase shown in the centre of the illustration. This is of a deep red colour, with elaborate floral decorations round the widest part, where the medallions are shown. The goat-head handles are exceptionally well modelled, and these, as well as the top of the lid, are richly gilt.

The Crown Staffordshire Porcelain Co., of Fenton, make quite an ambitious display of useful and ornamental china. They show several large vases, blue and

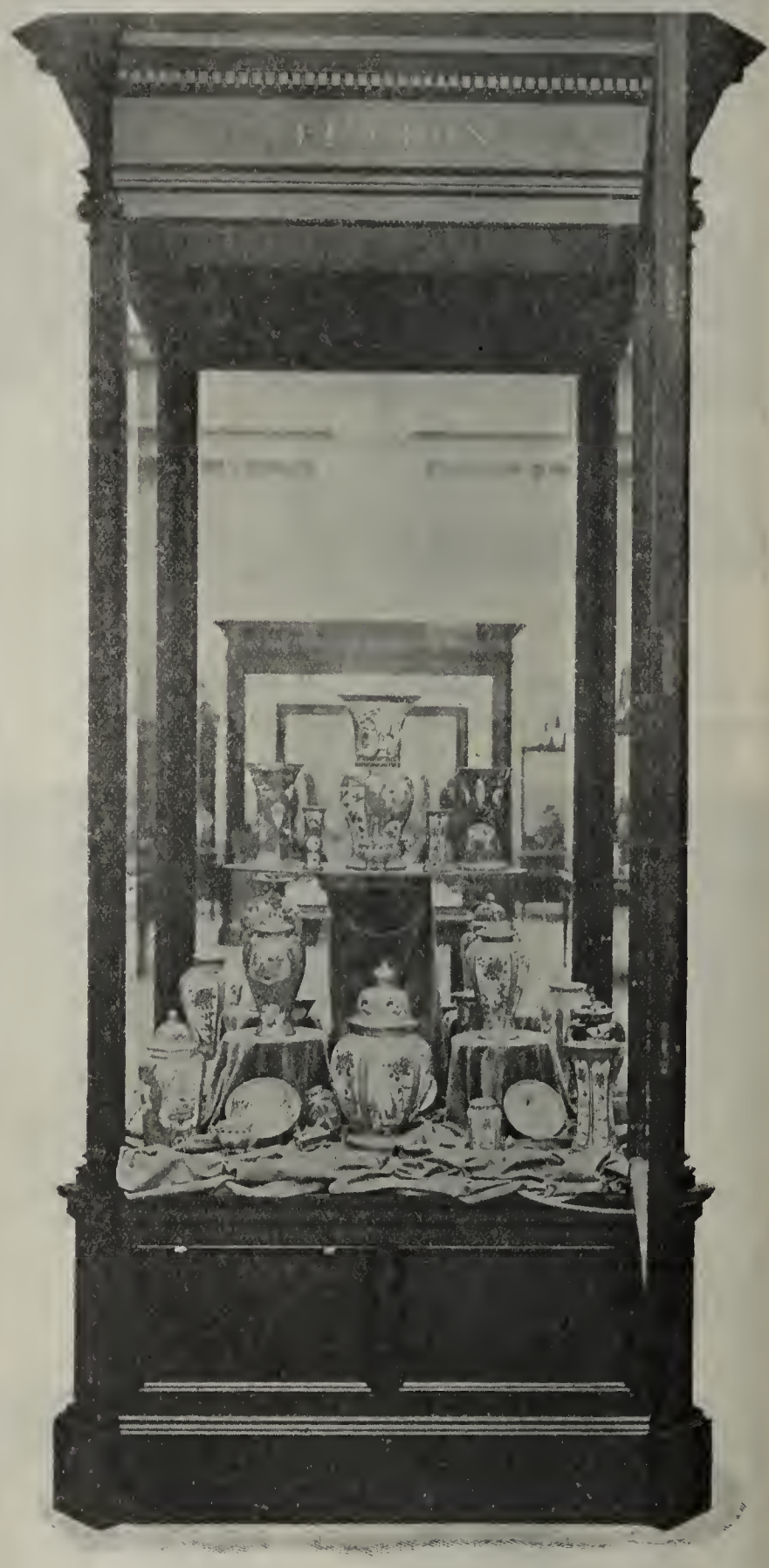


Crown Staffordshire Porcelain Co.

gilt, with floral and view panels; a number of reproductions of the choicest old Chinese styles; a quantity of pierced ware after the Dresden patterns, embellished with raised flowers and blackberries; a variety of the famous old willow pattern combined with a fancy border, old English tea ware; and a number of souvenir articles, such as quaint human figures, grotesque birds, &c.

Wood & Sons, of Burslem, have a utilitarian display, from which, however, the artistic element is by no means absent. They show toilet ware and table ware, decorated in old Chinese styles, roses, hawthorn and plum blossom being the most common. Similar decorations are used on some fine vases shown in a wall case. Plain but serviceable table ware, toilet ware in simple shapes, and white granite semi-porcelain ware make up the rest of this exhibit. The decorations are not conspicuous, but a conventionalised cornflower is somewhat pleasing, as also is the daffodil design in soft toned greys and blues.

Mr. A. G. Harley Jones, of Fenton, devotes the two cases at his disposal entirely to revivals of old Chinese wares. There is a great variety of beautiful reproduced shapes in vases, rose bowls, pot pourri, and small vases. Of special importance is the reproduction of powder blue, Kang Hsi period, combined with decorations of panels or reserves of white with the following subjects:—Exotic birds with gold embellishments, four seasons with gold tracings and peony decoration, &c. The large exhibition case illustrated is practically devoted to pieces entirely done by hand; among these I noticed the vase 1540, mille fleur, decoration famille rose; vase 1538, hexagon, famille

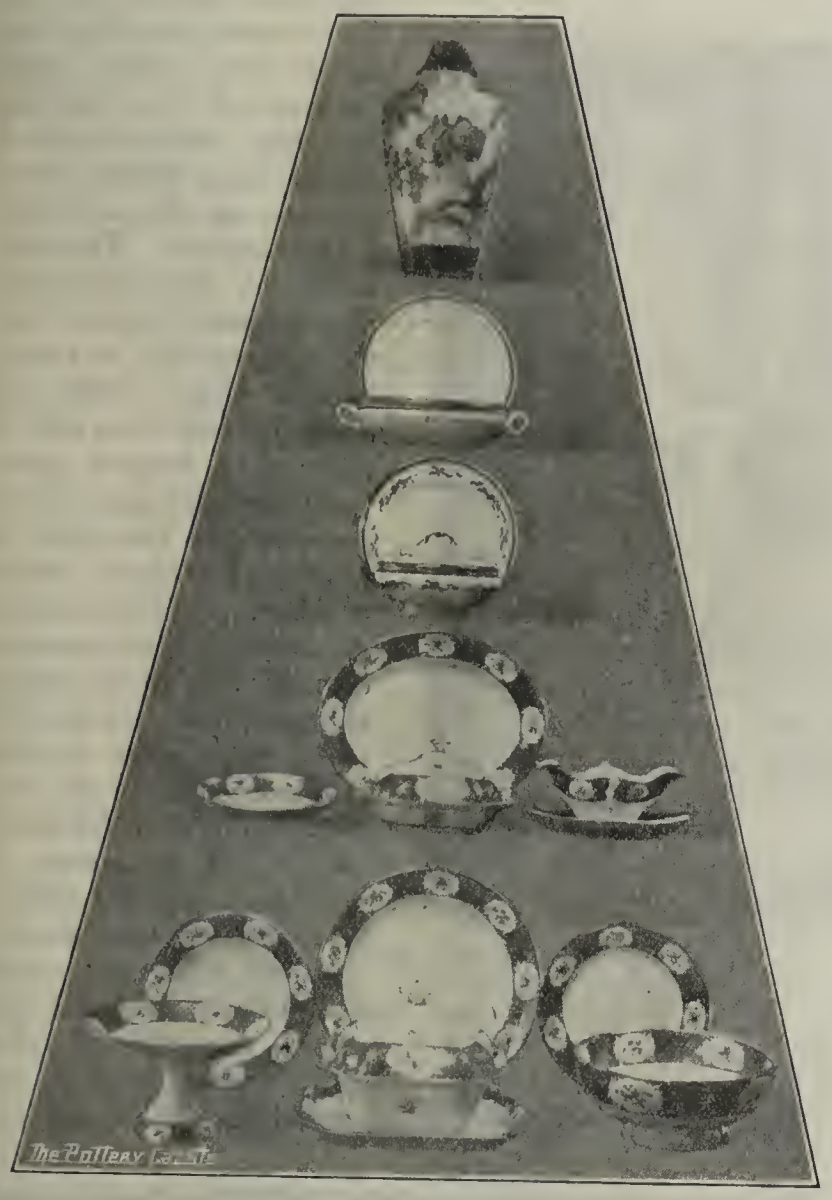


Mr. A. G. Harley Jones.

rose with a background and green fillings; rose bowl, green prunus; 1542, trumpet shape, famille verte; vase 1506, hexagon, famille verte; vase 1538, hexagon, aubergine green famille rose. In a large octagon stand, the Japans, and especially the electric lamps with hand-painted shades to match the powder blue, make a very effective display.

Wedgwood & Co., Ltd., of Tunstall, make a characteristic show of table, toilet, dessert, tea, and coffee ware in

their well-known blue and gold decoration. A typical dinner set which we illustrate is a very good reproduction of old Sèvres, bearing a fleur-de-lys decoration in best



WEDGWOOD & CO., LTD.

chased gold on a mazarine blue background with white panels on which are hand-painted floral groups. Another set exhibits a treatment in narrow bands of blue, between which a garland pattern is produced in chased gold, together with an application of the "husk" pattern, also in chased gold, to the bands of blue. This is an extremely pleasing and effective decoration. A style shown on one of the toilet sets, which is particularly suited to the present phase of Continental taste, is the "Broderie," in which panels of broad blue vertical bands with best gold embellishments alternate with white panels treated with hand-painted conventional designs. An attractive morning set is shown decorated with the Greek key in black on a broad band of chased gold, below which is an artistic lace border in a pleasing tone of silver grey. The tall vase on the centre of the stand has a blue and gold base and top with blue irises painted on a white ground between. This is fitted up as an electric lamp with a blue and gold shade, which harmonises extremely well with the rest of the exhibit.

R. H. & S. L. PLANT, Tuscan Works, Longton, display their well-known "Tuscan" china in reproduction tea ware comprising early English, Chinese and Famille patterns. The most striking feature of the exhibit is the reproduction of the original shapes and designs made by the Chinese potters under the Ming, Kang He, and Kien-lung dynasties. The Famille series comprise the Famille Noir, Famille Verte, Bleu de Roi, and Famille Rose.

BIRKS, RAWLINS & CO., Stoke-on-Trent, have applied their "Persindo" decoration, a revival of the old Persian style, to a multitude of vases and other ornaments and, with less appropriateness, to grotesque figures of animals. They also show some china baskets in the old Bow style, encrusted with flowers. A plain, square straw-coloured basket is perhaps the best example of this type. A great part of their exhibit consists of small articles suitable for souvenirs, but they have also a few lines which should attract the connoisseur. Among these are conspicuous the pâte-sur-pâte plaques and vases, one or two of Mr. F. A. Rhead's designs being worthy of note. We may mention specially one representing giant lobsters and seaweed, and another illustrating a quatrain from the Rubaiyat of Omar Khayyam, with a draped female figure appropriately posed in the foreground, and an Oriental city behind. Also worthy of notice is a bold study in coloured pastes called "Offerings to Bacchus." Another shapely vase with a female figure playing a mandolin, allegorical of music, is in pâte-sur-pâte by L. A. Birks. A pair of pilgrim bottles by the same artist are decorated in pâte-sur-pâte with "Cupid building a house of cards" and "Cupid blowing down the cards." A fine cylinder vase decorated by F. Ridgway in coloured pastes. "Peacock and flowers" has been highly appreciated for its colour scheme. A number of plaques in pâte-sur-pâte are exhibited by L. A. Birks. Some very rich dessert plates and trays, exquisitely painted by Mr. Wallace, are also shown, and also some déjeûner sets and tea services charmingly decorated in old Sèvres and other styles. Prominence is given to imitations of the well-known blue



BIRKS, RAWLINS & CO.

and white Copenhagen ware, ships, fishes, birds and flowers being depicted in dark blue on a light blue grey ground.

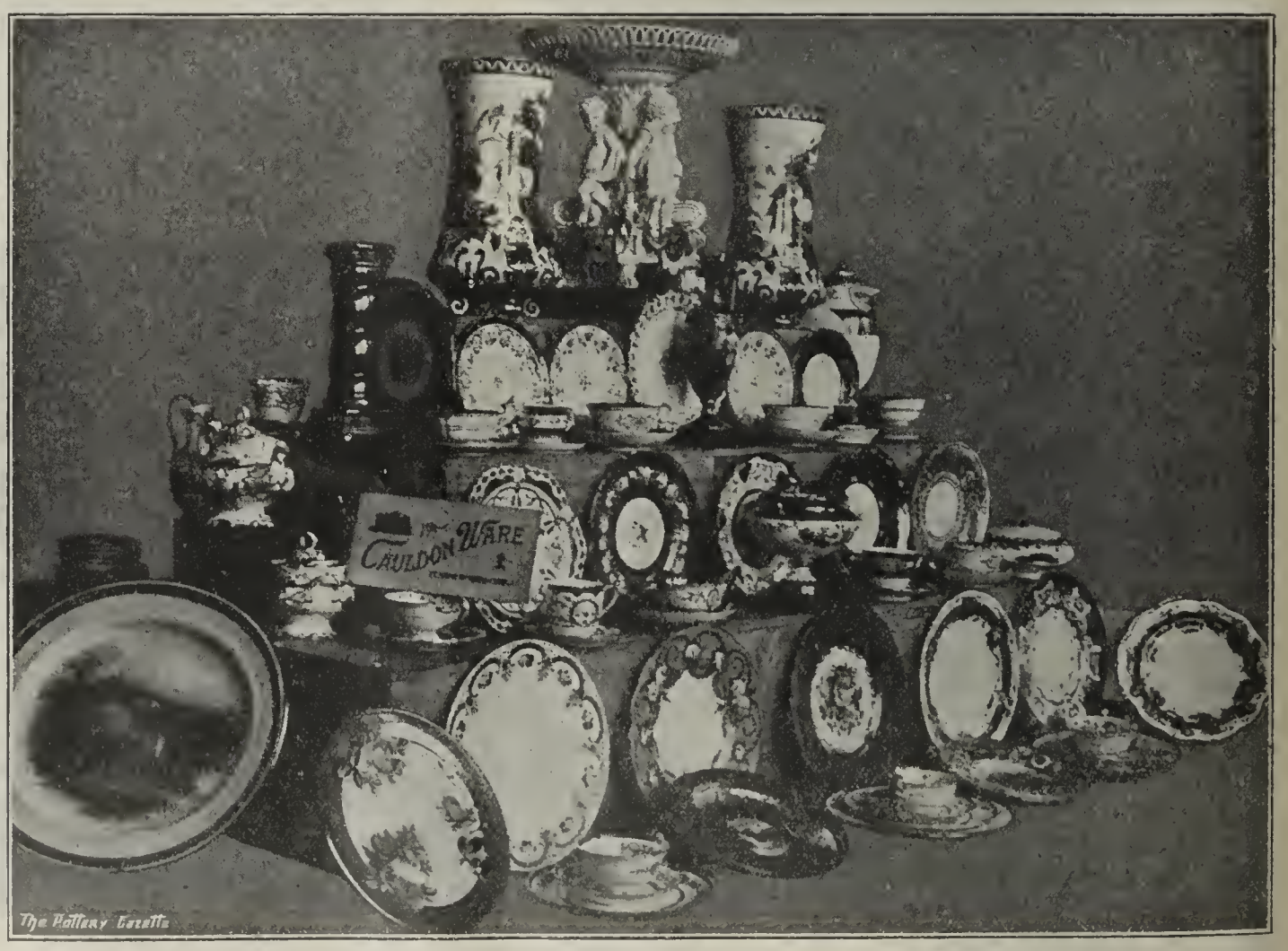
Mr. W. BENNETT, of Cleveland Works, Hanley, who, I

believe, figures as a new exhibitor, shows a few pretty lustre effects, one bowl being already marked "Sold." The main portion of his exhibit, however, consists of the ware shown in the accompanying illustration. The decorations, which are entirely in specially prepared underglaze colours, are applied on backgrounds of various bases, some of the pieces being bronze green, some peacock green and others a deep azure blue, while the glazes are of the low solubility type, which averages only 2 per cent. of soluble lead. The bowl in the foreground, with a band of irises inside, attracted our favourable attention, and the iris decoration is also effectively applied to some of the taller vases.



MR. WM. BENNETT.

CAULDON (BROWN-WESTHEAD, MOORE & Co.), LTD., Stoke-on-Trent, founded by Job and John Ridgway, 1774, have one of the very best displays from a utilitarian point of view, although they by no means neglect the artistic side of the industry. The combination of the useful and beautiful is well realised in the fruit-stand shown in the centre of the illustration. Although intended for practical use, this is quite an artistic achievement. The four children holding hands, who support the dish, are beautifully modelled, and the chaste decoration in simple white and gold is carried out with the restraint which is all too rare in these days of over-strained effects. The beauties of the trailing convolvulus or bind-weed thrown up by a blue-grey ground, are well shown on the two vases flanking this centrepiece. The chief feature of the exhibit, however, is the array of plates and dishes, some severely simple, and some highly ornate. The dish shown at the end of the illustration, depicting two sheep on a moor, has a blue, white and gold banded rim, and is one of a superb pair. Another fine plate has a pierced gilt rim, with a border of pansies and a single pansy in the centre. A similar arrangement is carried out with finely executed roses, while the three large roses on the handsome plate in the foreground of the illustrations are marvels of truthful representation. Some tasteful menus decorated with birds and flowers are exhibited, and some china toilet sets with rich floral decorations. The cups and saucers are of the highest type, some of the coffee cups being specially commendable. One I noted was self-coloured in a delicate olive-green, white inside, with gilt rim and handle.



CAULDON, LTD.

E. BRAIN & Co., of Fenton, exhibit their Foley china

table ware in simple but artistic forms and decorations. The colouring in green, white and mauve is soft-toned to harmonise with the unassuming yet pleasing shapes. Plain self-coloured sprays, festoons, wreaths and bands on white grounds, constitute the majority of the decorations. Roses of Chinese and conventional types are sparingly used in association with foliage wreaths. In the "Swansea" table ware roses are sparsely scattered on white and gold grounds, the pieces having fancy borders in red and green.

Bishop & Stonier, of Hanley, make a distinctive display on very practical lines. Ewers and basins, plates and dishes, cups and saucers, constitute the major part of their collection. The decorations range from plain Mazarine blue and white to elaborate schemes, which, in the case of some plates in particular, cover almost the entire surface. The ornamentation of the large centre vase, applied also to several other pieces, is a harmonious blend of cerulean blue, terra-cotta red and white. Another decoration, shown on the ewer in the foreground, and also on the flowerpot beside it, is a gilt Chinese dragon standing out boldly from a ground which is black above and white below. The dragon motif appears also on other bowls in gold on a deep black ground, one having finely modelled gilt dragons for handles. A piece, not shown in the illustration, but very attractive, is a punch bowl surrounded by a procession of figures and a band bearing convivial mottoes. The Oriental flower and bird decorations which now have a considerable vogue are applied to various services. The dainty coffee sets, richly decorated, are well calculated to suit the taste of the Continental customer.



Bishop & Stonier.

Mr. W. Howson Taylor, of Smethwick, Birmingham, has been encouraged by his success at previous exhibitions to put forth new efforts on the present occasion. His fine-bodied vases and bowls, with their shining lustre surface, and, on a smaller scale, his buttons, links and hat-pin heads in Ruskin china, are all in good demand. One piece, of a rich red plum colour flecked with green, is marked as having been sold to the Copenhagen Museum. The vine and grape border and shamrock design are applied to some of the pieces, but the majority of them rely for decoration entirely upon the beauty of their glazed surfaces. The predominating colour is, perhaps, the yellow lustre, but one of the best vases is of a pure lapis-lazuli hue. Other pieces are self-coloured, red, green and blue, others again present a green and brown mottling or a grey and white crystalline surface; but perhaps the most beautiful of all is the delicate quaker-like dove-grey glaze.

G. L. Ashworth & Bros., of Hanley, give prominence to their "Estrella" and "Lustrosa" crystalline and lustre glazed ware. These beautiful glazes are applied to vases, bowls, plaques, and other pieces. A fine turquoise-blue shade had been achieved on one flask-shaped vase, which bears the magic label "Sold." Some deep blue and bronze tints are highly effective, and a curious green crystalline glaze appeared to be unique. In some of the crystalline glazes a remarkable grained appearance had been obtained, instead of the usual irregular mottling. This firm also showed some excellent reproductions of Mason (whose successors they are) in old Chinese shapes and decorations. Some varieties of the well-known Dragon pattern are included.

The Royal Aller Vale and Watcombe Art Potteries, of Newton Abbot, have sent a good selection of their typical Devonshire wares to the exhibition. What Continental customers will make of the dialect mottoes we do not know, but at any rate there is much to attract them in the quaint shapes and usually unassuming decorations of this well-known ware. Among the motto goods I noticed an assortment of useful articles such as candlesticks, butter dishes, egg cups, jugs, &c., but far higher artistic flights have been made in producing many of the art vases. Some of these have been printed with views of Cockington village, the pretty rural street being shown in perspective. Windmills and fishing boats are also used, and a bunch of daffodils is very naturally reproduced. The old English cock-fighting, illustrations of which have been shown in this Gazette, are well represented. There are also several tall vases, with flowers and birds painted upon them, an

iris upon a blue ground being perhaps the most aeeeptable. The aneient key-pattern embossed in green on a blaek ground eneireles another large vase, while two handsome bronze green urns with perforated lids and deeorated also with floral panels. are very appropriate if they are to be used. as appears likely, for pot-pourri. These vases. shown in the foreground of the illustration, represent a really admirable feature in the aehievements of this progressive firm.

After reviewing the very eomprehensive British exhibits of pottery, those of other eountries neeessarily appear meagre and disappointing. Whether it is that foreign manufaeturers are too full up with orders to trouble about initiating further business, or whether they think that there are better ways of doing this than by partieipating in international exhibitions, or whether we may "lay the flattering unetion to our souls" that they find it useless to display their goods alongside those of their British eompetitors—whatever be the reason, the faet remains that the British pottery exhibits far exeeed in number and importanee those of any other eountry whatever.

Although the Belgian industries oeeupied more than one handsome and spaeious building, a survey of the Belgian seetion failed to reveal any exhibit whatever representing the eeramie industries exeept a few roofing tiles. True, a large portion of the seetion was ineomplete at the time of my visit, and wholly given over to earpenters and deeorators, and it is possible that those who follow in my steps may find some Belgian ceramies represented. It seems hardly likely that the important sheet glass industry, at any rate, would refrain from exhibiting, espeeially as I was informed that the trade is in a very flourishing eondition. The reeent labour troubles have been settled for the time, at any rate, and orders are eoming in plentifully from all markets.

Immediately opposite the British building, on the further side of the garden mentioned earlier in this artiele, stands the French seetion. This is very eomplete and admirably arranged, and has the honourable distinetion of being fully eatalogued at an early stage. Immediately on entering the seetion I was pleased to diseover in the gallery devoted to Freneh national manufaetures, a very choiee display of the produets of the National Poreelain Faetory at Sèvres. The exhibit is set out on a raised daïs



The Royal Aller Vale & Watcombe Pottery Co. [*Photo. by Samson, Brussels.*

of tiles also manufaetured at Sèvres. The great majority of the pieees shown are of an ornamental eharaeter, tall vases and jars predominating. It was extremely interesting to notiee the subdued eolouring on nearly all the pieees exhibited ; even the rieh Bleu de Sevres, the Royal purple of eeramie eolouring, was eonspieuous by its absenee. Quiet tones of brown, greens and greys on white or ivory grounds were employed to traee ehaste artistie designs, mostly floral in eharaeter. Some elusters of blaekberries were elegantly wrought, but even finer is the rendering of bunehes of syeamore "keys" on a smooth vitreous surfaee. The deeorative possibilities of pine eones are also effeetually realised. Besides these speeimens from the vegetable world, the graeeful forms of birds are freely used. Aeeurate observation of nature is

shown in the association of some perky little tits with the thistle-down on which they delight to feed. Another spirited decoration, "Les Canards," consists of a flight of ducks above, with a bed of irises below. Although these designs are in accordance with the latest trend of modern taste, the Sèvres artists have not wholly abandoned the classic traditions to which their historic manufacture is so largely indebted. An instance of this is seen in the "Girdle of Venus" vase, the girdle being composed of alternating shells and medallions. The exhibit also includes some exquisite coffee services; one decorated with maidenhair fern in green, gold and white, and another with a slightly conventionalised blue floral design. No visitor to the Ghent Exhibition, who is interested in ceramics from the artistic point of view, should fail to make a careful study of this admirable exhibit. The labelling of each piece with the name of the artist is a commendable practice which might with advantage be extended to other exhibits.

Sèvres vases, conspicuous by their giant size and harmonious ornamentation, are also used throughout the French section for decorative purposes. In the horticultural section is a huge tile portico for garden use with a lifelike bust of the great god Pan in the centre, and two stately vases, lemon coloured and crystalline glazed, at the sides.

The French ceramic court is chiefly notable for the exhibits which are not there. The famous Limoges houses, who have formerly been represented, found, I was informed, that no space was available when they made their application somewhat late in the day; but it does not appear that they were greatly troubled, as they are extremely busy with orders, principally for the American market.

One whole side of the French ceramic court is occupied by a great array of chemical stoneware pipes and alembics, stills, beakers and tubes, sent by a Bayeux firm. This exhibit also includes a small selection of fireproof ware in blue, white, brown and green colours.

There are two or three little cases of art ware of no special interest and a nice collection sent by M. J. Sarlandie, of Limoges, comprising vases and framed plaques, decorated in art enamels. The figures are rather conventional in type, and based on seventeenth and eighteenth century models.

In this court also are two small displays by makers of ceramic colours, the larger being that of A. Lacroix et Cie, of Paris. They show specimen tubes of colours and palettes with the colours rubbed out upon them, also several specimen articles to which the colours have been applied. A speciality is made of enamel colours for fireproof ware and also underglaze hand-painted colours. Some very nice effects are produced upon glassware, especially on a dainty little liqueur set which is exhibited.

The French glassware court is somewhat better supplied than that which is occupied by the pottery, and is the best because it is the only distinctive exhibit of glassware in the whole exposition. The Cristalleries of Choisy-le-Roi have a very handsome stand, on which a brilliant display of heavy cut glass is set out. The exhibit is notable for the variety of articles displayed; especially prominent are some huge vases with entablature cutting, a decoration which is also applied to a drain-pipe shaped umbrella stand. Table glassware, however, predominates in point of numbers. Wines, tumblers, jars for scent and preserves, decanters and butter dishes all being represented, while an ewer and basin and toilet tray show how the glass manufacturer is now competing with the potter. A very neat article, which is new to my experience, is a silver-mounted crumb tray; but, indeed, the continued extension of the utilities of glass makes one wonder what will be the next sphere which it will invade.

A distinct novelty in the French glassware is the Cristaux d'Art Richard, sent by Edmond Etling et Cie, of Paris. This industry has been established during the past year, and its object is to produce articles of a particular type at popular prices, which have hitherto only been made in very expensive styles. The glass is of brown or bluish smoky hues with novel art decorations engraved in darker shades. Both the shapes and decorations have much affinity with the "art nouveau," while avoiding its wildest extravagances. Some pretty examples are seen in tall electric lamp fittings to which palm trees, in one instance, and irises in another, are applied. The iris also decorates many of the taller vases, the long stems harmoniously following the graceful contour of the various specimens. Fir trees are suitably engraved on some taller pieces and fir cones on lower pieces; the flaunting beauty of the columbine is also well reproduced, but perhaps the "chef d'œuvre" is the application to some of the larger pieces of Alpine views, with snow-capped mountains in the background and rushing torrents or jagged rocks in the foreground.

Another very interesting case, arranged by a firm at Chauny, contains coloured glass beads of various sizes and shades, very prettily grouped. Examples are also to be seen of the tiny hollow rods from which these beads are cut. Considering the large number of barbarous peoples living under the British flag in various parts of the Empire, among whom coloured beads pass as currency and are regarded as great treasures, it is rather remarkable that British manufacturers have not devoted more attention to the production of these articles.

In the next case are several rows of scent bottles, some with cut stoppers and some with gold mounts. Of the former, a butterfly-shaped stopper with two wings attracted my favourable notice, while of the latter, a combination of three phials joined with gold to form a tripod, was also noteworthy. These bottles were accompanied with some opaque boxes for trinkets, comfits, &c. Near by is another small case containing special moulds for the treatment of glassware so as to produce an iridescent surface.

Some fine heavy-metalled glass shown by a Paris firm reproduces admirably the clouded appearance of much highly prized antique glassware. The shapes follow old models in accordance with the material, the wares comprising jugs, wine glasses, goblets, jars, and liqueur glasses.

Another stand supports at the rear a variety of glass sheets and mirrors, while in front are piled nests of glass shades, lumps of coloured glass, and tastefully arranged coloured glass plates; as well as curved glass sheets, such as are now much in demand for shop windows and motor car screens. A French glass exhibit, which was incomplete when I viewed it, consisted of coloured glass sconces, globes, &c., for illuminating purposes.

The remainder of the stands in this court were devoted almost entirely to glass bottles. This manufacture apparently is increasing in importance in "La Belle France." Whether this is due to a greater consumption or a greater production of the beverages to be contained in the bottles is not for me to say. The bottles vary greatly in size and colours; many are elaborate in shape, and the various means of applying stoppers afford an interesting study. Glass barrels with taps inserted, glass pavement lights, and even electric insulators in green glass are also to be seen on some of the stands in this section.

In the French furniture department, a Nancy firm display art glass vases and embossed and coloured illustrated sheets (one panel cleverly representing an open window with a country scene beyond); and also a few glass busts and figures. In the same section are to be seen the well-known engraved crystals associated with the

name "De Vez." These appear in greater variety than ever, being applied to plaques, framed pictures, and even to the electric light fitments which illuminate the stand. The designs, as formerly, mostly represented trees and flowers, but I noticed an excursion into the animal kingdom in the shape of a quaint little owl.

In the French court of modern decorative art there are some interesting reproductions of old models in pottery, and a case of rather good cut glass.

The GERMAN section is housed in a building which is itself an interesting exposition of the trend of modern German art towards simplicity and severity, as referred to in our earlier article on this year's Leipzig Fair. The building is, indeed, quite cubist or rectangular in design, and, as for its attractiveness, I can only say in the well-known French phrase, "For those that like that sort of thing, it is the sort of thing they like."

The German ceramic industry, commercially regarded, is scarcely represented at all. Most of the pottery and glass shown in the section is of purely artistic interest, though from that point of view it possesses undeniable attractions. The court in which the goods of this class are arranged is decorated with a series of fine art figures on shelves and pedestals. Around the walls are several recesses in which are set out the various exhibits. The most notable of these are some animals and birds in the well-known Copenhagen style, a magpie, a parrot, a kingfisher and a King Charles spaniel all being particularly good. In the case marked "Royal Berlin," the supple form of a leopard is gracefully modelled. Among some plain white china figures that of a crowing cock is worthy to typify the famour chanticleer himself. Of utility goods, nothing particularly remarkable is to be seen, though a coffee set, decorated with broad vertical black and white stripes with a gilt handle, is striking if not attractive.

The most important glassware has been supplied by the Haida Fachschule. The collection comprises some ex-extremely light and graceful pieces contrasting with very heavy cut jars, bowls, &c. The lighter pieces are attractively decorated with engraving and enamel, a good example being a black and red sequin border on a tiny liqueur set. Several self-coloured pieces show up well against those which are more elaborately decorated, a deep ruby red and some fine greens and blues being conspicuons. At the opposite extreme a vivid black red and yellow enamelled decoration, quite as opaque as porcelain, which sets the mere outsider musing on the wonderful ways of the glass manufacturer, who tries to make his wares look like pottery, and the pottery manufacturer who endeavours to produce surfaces which resemble glass.

Beyond the German section lies the spacious International Hall, in which are housed the exhibits of the various countries that have not constructed separate pavilions. This hall was largely in a state of chaos at the time when I inspected it, packing cases in course of destruction and stands in process of construction being the most conspicuous objects.

The small area allotted to DENMARK was, however, fully set in order, and contained very little besides ceramic goods. About half of the space is taken up by the renowned Copenhagen porcelains, chiefly well-modelled figures of animals, with a few plaques and flower-pots. The ware has often been described in our columns, and as nothing very novel appears on this occasion, further reference is unnecessary. The Copenhagen faïence occupies nearly as much space, the somewhat crude colouring contrasting with the modest tones of the porcelain. Among the faïence articles are to be noted a Ghent Exhibition memorial plaque and a selection of rather heavy tableware; but the great bulk of the display consists of quaint and sometimes almost uncouth vases.

Three stands are occupied by the familiar products of the AUSTRIAN ceramic industries. On one is to be seen the richly gilt and highly-coloured Haida glassware; on another the sumptuous Vienna vases, clocks, caskets, &c., with illustrated medallions on blue and gold grounds. The third stand is devoted to statuettes, groups, and other figures, which have considerable vogue on the Continent, although they are less familiar to the English market.

A very interesting stand in this hall is that in the small UNITED STATES section, retained by the Co-operative Flint Glass Co., of Beaver Falls, Pennsylvania, U.S.A. The glassware shown is of good body, though somewhat weighty, and is decorated with cut, pressed and coloured designs. This exhibit is of special importance as marking a step forward in the prospective invasion of European markets by the very able glass manufacturers of the United States.

So far, the exhibits which I have noted in the International Hall have been, like most of those in that building, of a bazaar or retail character, but a more wholesale trade is catered for by the JAPANESE pottery. This takes up the greater portion of the Japanese section of the hall, filling nearly the whole of one side. So far as could be seen, for the wares were only in process of being unpacked, a very wide range of goods is being offered. Although I noticed several of the highest specimens of the Japanese potters' very artistic productions, these were distinctly an exception. The majority of the goods shown consisted of tableware, especially tea sets of all grades from the most costly, packed in silk-lined cases, to the very cheap and crude red and white pots, cups and saucers. I was pleased to observe that the decorations in every case were of a native Japanese character, and there was no indication of the feeble imitations of Western styles, which have been seen at former exhibitions.

On the opposite side of the main thoroughfare which traverses the exhibition grounds stands the DUTCH section. Here I found the beautifully lustred vases which are made at Utrecht. The majority of these still rely on the beauty of their prismatic surfaces for their only decoration, but as a distinct novelty I noticed that, in a few cases, well executed flowers and birds had been successfully attempted. Particularly good was the representation of fish on one vase, the highly glazed surface suggesting that they were at home in their aqueous element. On an adjoining stand another firm exhibited their "Helios" faïence, the pieces being chiefly suitable for purchase as souvenirs. Yet another Dutch firm displays heavy faïence dishes and vases, the grounds being green or grey, with gold, yellow and black arabesques engraved upon them.

The ITALIAN exhibits consist almost entirely of beautiful marble statuary offered for retail sale, and such pottery as is shown looks coarse and clumsy beside the many sculptured masterpieces which fill the centre of the section. Nearly all the Italian pottery is a heavy faïence or majolica; one coffee service on a tray looked indeed so weighty as to need a powerful man to carry it. Slightly lighter in appearance are some pure white porcelain clocks and candelabra, but the modelling of these is distinctly ordinary. From Naples come a few huge vases, decorated with classic scenes, and some plaques which are undeniably pre-Raphaelite in style. Perhaps the best of the Italian pottery is the massive majolica ware intended for outdoor use. Some of the great pots or vases are admirably adapted to adorn the walks and terraces of an Italian garden.

In the small PERSIAN section are to be seen some fine

specimens of antique pottery, but these are only curiosities and not commercial goods. Among the FRENCH COLONIAL exhibits, which for some mysterious reason are relegated to the extreme end of the Park of Attractions, I found a small selection of clumsy blue and white moresque pottery from Tunis. The decorations are distinctly striking, though not particularly effective, and one coffee service is suggestive of an industry quite in its infancy or far advanced in senile decrepitude. Some quaint native pottery from the Congo is also to be seen in the BELGIAN COLONIAL section.

This completes my notes on the ceramic products at the Ghent Exhibition, and by their aid any pottery trade visitors should be able to search out with a minimum of difficulty such items as are of particular interest to them. Although, as has been said, the pottery and glass exhibits on the whole are somewhat disappointing, this should not deter anyone who can spare the time and money from paying a visit to the exhibition. If his business instincts are not sufficiently catered for, he will yet find plenty to reward his enterprise.

The exhibition is well planned and the grounds are beautifully laid out. The people of Belgium, and of Ghent particularly, are famous gardeners, and they have done their best, and a very good best it is too, to turn the exhibition grounds into an Earthly Paradise. The busy throngs of visitors from all lands afford constant amusement and education to the observant eye. Creature comforts are well catered for by an abundance of rather dear restaurants, and adequate lodging accommodation can be obtained by applying to the hardworking Bureau des Logements. Outside the exhibition the town itself is full of interest. The suburbs are replete with factories teeming with the manifold activities of modern industry, while the older central area of the city contains many glorious buildings connected with its long and historic past, and is well worth a visit on this account alone.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are taken from the June issue of the Board of Trade "Labour Gazette":—

THE POTTERY TRADES.—Employment in the pottery trades continued good on the whole, being about the same as a month ago. It was still adversely affected to some extent by the dispute of marl workers. Returns from firms employing 16,192 workpeople in the week ended May 24 showed no change in the number of workpeople employed, and an increase of 1·1 per cent. in the amount of wages paid, compared with the previous month. As compared with May, 1912, there was an increase of 1·4 per cent. in the number of workpeople employed and a decrease of 0·1 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	2,524	£2,878
Earthenware manufacture ...	9,767	9,319
Other branches (including unspecified)	3,901	3,681
Total	16,192	£15,878

Districts.	Number employed.	Wages paid.
Potteries	11,475	£10,591
Other districts...	4,717	5,287
Total	16,192	£15,878

In the Potteries district employment was reported as fairly good on the whole—about the same as a month ago. In the other districts it was the same as a month ago, good in the earthenware trades, and fair in the china trades. In Scotland it was good, and in the South-Western district fair.

THE GLASS TRADES.—Employment was fairly good on the whole, especially in the flint glass trades. There was, however, a decline in the ordinary glass bottle trade.

Branches.	Number employed.	Wages paid.
Glass bottle	6,035	£7,430
Flint glassware (not bottles) ...	1,837	2,117
Other branches...	273	309
Total	8,145	£9,856

Districts.	Number employed.	Wages paid.
North of England	646	£747
Yorkshire	4,994	6,094
Lancashire	852	1,018
Worcestershire & Warwickshire	724	890
Scotland	620	795
Other parts of United Kingdom	309	312
Total	8,145	£9,856

Returns from firms employing 8,145 workpeople in the week ended May 24 showed a decrease of 1·3 per cent. in the number employed and of 7·8 per cent. in the amount of wages paid, as compared with the previous month. Compared with a year ago there was a decrease of 3·6 per cent. in the number employed and of 10·5 per cent. in the amount of wages paid. Employment in the glass bottle trade was good generally in Yorkshire, especially at Leeds, where the medical bottle branch was specially busy; there was, however, an increase in the number unemployed owing to stoppages for repairs. At Mexborough employment was only moderate. In the North of England it was fair on the whole, but not so good as in the previous month. At St. Helens, Bristol, and Dublin employment was good; at Glasgow it was fair. With sheet glass flatteners at St. Helens employment was fair, and with sheet glass cutters it was good. At Birmingham employment was good with flint glass makers (with whom it showed an improvement), with flint glass cutters (who reported overtime as being worked), and with plate glass bevellers and silverers. In the Wordsley and Stourbridge district it was good with flint glass makers, and very good with flint glass cutters. With pressed glass makers on the Tyne and Wear employment was bad, with short time general, and was worse than a month ago and a year ago. With glass blowers in London it continued fair, and was rather better than a year ago.

Pottery and Glass in South Persia.—A British Consular Report from Bushire mentions that the Persian tribesman's belongings generally include crockery, basins and dishes, tea glasses with earthenware saucers, teapots (generally of Russian manufacture) and earthenware plates. As this market is within the so-called British sphere of influence, it might offer an outlet for British manufactures when the conditions became more settled.

Window Glass in Manchuria.—The Russian Imperial Consul-General in Mukden writes, respecting the Manchurian market, that there is a considerable sale of window glass there, the major portion of which is from England, the second place being occupied by Japanese glass. The former is much liked, whilst the latter, notwithstanding the strenuous efforts of the Japanese glass makers, fails to better its relative position. During last year English glass sold to the extent of 5,340 cases, and Japanese 2,100 cases. White window glass has the best sale. The demand for coloured is glass relatively unimportant. The balance of the Consul's report is made up chiefly of hints to Russian glass makers, informing them what they must, or, rather, what they must not do if they would have a share of the Manchurian glass business. One of the things, he says, they ought to do is print suitable catalogues in the Chinese language.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR MAY, 1913.

		Quantities.				Value.			
		Month ended May.		Five Months ended May.		Month ended May.		Five Months ended May.	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	191
To Germany	cwts.	5,365	2,423	19,133	15,674	£5,584	£3,790	£25.626	£26,2
,, France	,,	3,974	10,137	34,919	36,235	5,952	9,338	33,311	45,6
,, United States of America	,,	15,704	24,601	101,723	116,004	23,935	38,711	142,935	173,0
,, Brazil	,,	16,661	42,607	161,069	175,227	8,388	33,499	82,832	131,5
,, Argentine Republic	,,	34,099	48,812	142,119	211,789	19,000	27,071	105,696	136,2
,, British South Africa	,,	4.595	14,417	37.565	65,351	6,541	11,930	45,561	60,9
,, British East Indies	,,	17.243	27,254	153,897	176,398	12,375	21,269	91,117	112,4
,, Australia	,,	14.939	23,561	108.603	128,917	17,307	25,638	128.277	136,4
,, New Zealand	,,	3,583	5,723	35,060	35,222	5,080	8,005	48,207	50,5
,, Canada	,,	47,075	58,514	149,373	252,733	31,732	46,930	137,880	206,8
,, Other Countries	,,	87,591	103,435	414,195	501,972	54,099	68,927	273,704	332,9
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	,,	938	1,516	5,802	7,329	9,027	14,946	53,435	73,1
Floor Tiles for Tesselated Pavement	,,	5,026	6,959	27,622	33,946	4,395	6,539	28,486	30,1
All other Tiles (except Roofing and Street Paving)	,,	9,217	13,324	49,683	73,594	9,846	13,608	49,575	75,4
Sanitary Ware	,,	27,126	33,025	134,082	167,538	37,311	49,922	185,052	240,1
Electrical Ware, Door Fittings, and Chemical Ware	,,	2,762	2,627	18,253	24,798	2,424	4,569	16,589	22,81
Other Earthenware (including Semi-Porcelain and Majolica)	,,	84,580	123,561	521,648	603,261	107,429	166,130	678,374	808,5
Jet, Rock'm, and Glazed Terra-cotta	,,	24	700	1,009	4,153	67	538	1,666	3,7
Red, Stone, Brown and Yellow Ware	,,	121,156	179,772	599,557	800,903	19,494	38,856	101,969	159,0
GLASS.									
To British South Africa	value £	—	—	—	—	6,670	10,411	39,830	45,1
,, Other Countries	,,	—	—	—	—	139,595	166,006	651,933	733,9
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	17,534	21,736	88,284	116,356	29,523	36,777	148,878	187,0
Flint Glass	,,	6,555	7,888	37,554	34,751	22,092	28,397	118,690	125,8
Glass Bottles	gross	92,041	94,223	402,298	407,724	53,624	58,757	241,486	251,1
Glass Manufactures, unenumerated	cwts.	57,227	63,789	253,139	268,900	41,026	52,486	182,709	215,0

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR MAY, 1913.

Porcelain, Chinaware, and Parian	cwts.	3,273	3,890	14,881	18,140	£16,149	£19,882	£74,737	£95,97
Floor Tiles for Tesselated Pavement	,,	3	560	250	868	12	372	250	64
All other Tiles (except Roofing and Street Paving)	,,	2,552	2,543	11,800	14,994	1,593	1,846	7,376	9,29
Sanitary Ware	,,	2	9	258	69	12	6	515	19
Electrical Ware, Door Fittings and Chemical Ware	,,	2,085	2,022	11,752	12,684	3,188	3,316	18,048	20,53
Other Earthenware (including Semi-Porcelain and Majolica)	,,	29,153	31,348	129,892	136,089	59,131	60,339	255,147	275.67
Jet, Rock'm, and Glazed Terra-cotta	,,	—	40	23	543	—	178	89	1,15
Red, Stone, Brown and Yellow Ware	,,	16,222	36,893	115,353	147,880	4,741	8,390	25,837	30,55
Window and German Sheet Glass	,,	108,446	72,966	563,320	522,822	59,305	42,654	317,180	293,21
Plate Glass	,,	27,374	38,197	144,289	205,314	36,128	46,579	183,116	244,63
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	,,	72,290	77,273	342,425	383,460	105,897	105,715	506,630	525,79
Glass Bottles	gross	136,357	155,772	733,893	830,838	61,287	66,605	319,204	345,66
Glass Manufactures, unenumerated	cwts.	2,255	349	8,276	1,266	1,867	902	7,115	2,81

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR MAY, 1913.

Porcelain, Chinaware, and Parian	cwts.	821	932	3,797	5,299	£4,188	£4,991	£20,537	£27,95
Of all Other Sorts	,,	806	1,457	4,611	6,636	870	3,354	5,163	12,68
Window and German Sheet Glass	,,	425	119	4,195	2,477	304	82	2,402	1,36
Plate Glass	,,	679	885	1,899	5,113	898	1,482	2,694	7,28
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	,,	1,844	2,025	5,802	6,733	4,353	5,066	15,362	19,79
Glass Bottles	gross	4,028	4,423	19,021	25,969	2,272	2,629	10,554	14,69
Glass Manufactures, unenumerated	cwts.	127	230	988	667	141	173	1,134	51

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Apl. 27, 1913, to May 24. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to May 24. Packages.	Corresponding Period, 1912. Packages.
Boston	730	419	3,648	2,645
New York	578	827	4,097	3,231
Baltimore	345	213	2,557	2,953
Philadelphia	216	187	1,189	1,380
New Orleans.....	195	29	592	299
Newport News ...	—	3	35	48
San Francisco ...	92	44	502	493
Portland, Maine.	67	15	1,283	608
Galveston	—	5	61	219
Portland, Oregon	70	17	161	82
Inland Points ...	111	27	336	223
Total	2,404	1,786	14,461	12,181

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c. ; also marked local newspapers.

Mr. Frank Bale, who was in business at Bideford (Devon), as a glass and china dealer, died on June 15, after being ill for a considerable time.

Mr. E. Gill, owing to his departure from the city, is giving up the glass and china business he has conducted at Market-place, Peterborough.

Mr. J. E. Brown, 450, Gladstone-street, Peterborough, a well-known member of the glass and china trade, passed away on June 10, after a short illness.

Mr. Otto Rosenstiel, of 4, Charles-street, Hatton Garden, E.C., informs us that he has resigned his position as a director of the Anglo-Belge Glass Association, Ltd.

Mrs. Collier, who has for a long period conducted a glass and china business at 321, Manchester-st., Werneth, Oldham, announces that she is retiring from commercial life. Her stock was disposed of by auction on June 11.

The marriage took place at Lowe Church, Rickinghall, near Diss, on June 5, of Miss Mabel Watson, youngest daughter of Mr. Joseph Watson, of The Potteries, Wattisfield and Botesdale, and Mr. Percy John Rampton, of Wandsworth, London, They were the recipients of many costly presents.

British Clay Exports during the month of May were as follows :—China clay, 77,805 tons (£93,517) ; fire clay, 268 tons (£3,273) ; other sorts, 9,184 tons (£6,663). Exports for the same month of 1912 were :—China clay, 77,955 tons (£66,169) ; fire clay, 6,462 tons (£4,951) ; other sorts, 9,412 tons (£7,663).

The death has occurred after a brief illness, of Mr. Wm. Henry Ball, who had, for a long period of 45 years, been with the Kinson Pottery Co., Ltd., Parkstone (Dorset). At the funeral on June 6, the coffin was borne by eight of the pottery employees, and the mourners included the Mayor of Poole, Ald. H. S. Carter, J.P., who is a director of the company.

Potters as Footballers.—To celebrate the winning of the Bournemouth and District Junior Football League (First Division) Competition and the Page Croft Cup, the Carter's Potteries Athletic Club, Poole, held a dinner on June 9, over which Mr. Roger Carter presided, and at which the medals won in the two competitions were distributed to the members of the teams.

Presentation.—Mr. W. H. Minshall Jones, who has for upwards of 20 years been engaged in the glazing and sanitary ware department at the works of J. C. Edwards & Co., Terra Cotta Works, Ruabon, near Wrexham, has been appointed manager to J. Jameson & Son, Ltd., Corbridge-on-Tyne, and as a parting gift the firm and staff have presented him with a silver-mounted oak tray.

The marriage took place, at St. Dunstan's Church, Canterbury, on June 5, of Mr. Henry Court, manager at Herne Bay for Court Bros., glass and china dealers, Burgate-street, Canterbury, son of Mr. W. H. Court, St. Augustine's-rd., Canterbury, and Miss Jessie Isobel Jackman, youngest daughter of Mr. Joseph G. Jackman, Maxwell, Whitstable-road, Canterbury. They were the recipients of many valuable presents.

The death has taken place of Mr. Francis Harvey, who had had a lengthy connection with the Kinson Pottery, Ltd., Parkstone, Dorset. Deceased, who was 71 years of age, had for over 40 years been a modeller. The mourners at the funeral included the Mayor of Poole (Alderman H. S. Carter, J.P.), who is a director of the Pottery Company, the clerical staff, and the employees, the works being closed for the afternoon.

Mr. James Bishop, of Stourbridge, who died on June 5, was in his seventy-sixth year, had never had a week's illness in his life. He celebrated his golden wedding some two years ago. Commencing work at a very early age in the glass trade at Holloway End, he was for a considerable period employed at the works of H. G. Richardson & Sons, Wordsley. He had evidently found that glass working was very far from being an unhealthy occupation.

Fires.—On June 11 a fire occurred at the works of Connolly & Steele, glass bottle makers, Withington-street, Pendleton, Salford. The fire originated in the general offices, to which it was confined.——A fire occurred on June 10 at the glass works of Robertson & Co., Low Lemington, Northumberland. The outbreak originated in one of the large warehouses, and it speedily involved other buildings. The large warehouses and offices were completely gutted.

Boy Labour in Glass Works.—An article recently published in "Tit-Bits," entitled "Boys Who Work All Night," gave cause for some dissatisfaction among both employers and trade union officials. Representations were made to the Editor, who sent a special representative to Stourbridge to make an independent investigation of the conditions under which the lads referred to worked. The investigation led to the conclusion—"that the proposed restrictions were superfluous, and only calculated to disturb and imperil an industry commercially of importance and in its artistic excellence a credit to our country."

Lead Poisoning.—The total number of cases of poisoning reported to the Home Office under the Factory and Workshop Act during May, 1913, was 33, of which 2 were fatal. In addition, 35 cases of lead poisoning (4 of which were fatal) were reported among house painters and plumbers. During the five months ended May, 1913, the total number of cases of poisoning reported under the Factory and Workshop Act was 235, as compared with 224 in the corresponding period of 1912. The number of deaths was 10 in 1913, as compared with 20 in 1912. In addition there were 112 cases of lead poisoning (including 19 deaths) among house painters and plumbers in the first five months of 1913, as compared with 85 cases (including 13 deaths) in the corresponding period of 1912. Of the 33 reported cases of lead poisoning in May last under the Factory and Workshop Act, there were 6 cases, in connection with the china and earthenware trades, 2 of the persons affected being females. During the five months ended May, 1913, there were 32 reported cases, and 5 deaths in our industries as compared with 35 cases and 8 deaths during the corresponding period of 1912.

Pottery and Glass as Presents.—The suitability of pottery and glassware for wedding and other presents cannot be too frequently or forcibly emphasised by the enterprising

dealer. We have been pleased to receive during the past month a folder from Mr. M. Stewardson, of 221-3, Westgate-road, Newcastle-on-Tyne, suggesting pottery and glass as "artistic and acceptable, useful and inexpensive" wedding gifts. The wares quoted for and illustrated are well chosen, being of both a useful and ornamental character. Some of the blocks, we are informed, have been supplied by the makers of the advertised goods. The folder is well printed on stout, well-glazed paper, and should prove a potent bringer-in of business. Another wideawake retailer, Mr. Chas. E. White, manager for "Hogg's, of Belfast," advertises in a local paper, "Give something out of the ordinary for your next gift." This exhortation is supported by an illustration of a handsome pot and pedestal, with a judicious note as to prices. Tate & Oglesby, Ltd., of Hull, also place "Wedding Presents" at the head of a striking advertisement in a Hull daily. Such smart advertising as this should help to keep things moving, even in the slackest times.

The Canal Question.—At the Guildhall, on June 20, was held a meeting of the Waterways Association, when a resolution was brought forward dealing with a recommendation to the Government to take immediate action upon the report of the Royal Commission on Canals. Mr. Neville Chamberlain, moved the report of the executive committee of the Association. All they had asked was that a Waterways Board should be formed to acquire the waterways comprised in "The Cross," and centralise the ownership, thus doing away with the divided ownership which hitherto had been one of the curses of the canals. He believed that the railway companies would oppose them, and just now was the time for them to make the most of their opportunities and to push their propaganda for all it was worth. The motion was seconded by the chairman, the Lord Mayor of Cardiff, and carried. A resolution was also adopted that, in view of the cheaper transit facilities, due to canal development in Germany, France, and Belgium, the congested conditions of transit of heavy and bulky goods in this country and the consequent hindrance to trade, the Association urged the Government to take immediate action upon the report and recommendations of the Royal Commission on Canals by introducing a Bill to give immediate effect to a section of the report which recommended the appointment of a Waterways Board and the acquisition by the State of the four trunk canal routes, the Waterways Board acting as the controlling authority, to be toll-takers only, not carriers.

The Royal Academy Exhibition should possess a certain amount of interest for such artistic industries as those of potting and glass making, as affording an index to the prevailing decorative tendencies of the day. The pictures this year, however, reveal no very striking inspiration. If anything, portraits and "pot-boilers" of the Christmas coloured supplement order are more plentiful than ever; but who will grudge the harmless artist his meed of bread and cheese? Pleasing prettiness is as common this year as grim vigour is scarce. Among the signs of grace will probably be reckoned the comparative rarity of the bellicose and of "the altogether." The number of children depicted is also perhaps a healthy symptom; babies, indeed, appear to be coming very decidedly into fashion, so, if art is the expression of the spirit of the age, we must be entering a period of domesticity. Concerning the pottery and glass in the paintings there is little to be said. In "The Cup of Tea" all the pieces of the choice china service are odd. The specimens in "A Private Collection" are too indistinct for identification. The numerous bunches of flowers (often well painted) are mostly contained in simple, self-effacing jars or vases. An exception is "The Blue Vase." Here the receptacle is more prominent than the anemones it holds. It is a plain cylindrical jar with coiling ear-like handles, and coloured a most vivid blue. The nearest description of the hue the writer could hit upon was ultra-ultramarine, but the lady who accompanied him kindly suggested "Reckitt's" as the fit and proper word. In "The Oak Room" are two huge Chinese vases, and one or two pretty Chinese crocks also appear in "An Odd Lot.

Mr. George Frederick Golding, who has recently retired. for 37 years acted as the West of England and South Wales representative of Pountney & Co., Ltd., and in conjunction therewith has also represented Edward Moore & Co., South Shields, for 27 years, Mr. Samuel Radford, Fenton, for 20 years, and latterly also Mr. T. C. Wild, Longton. Mr. Golding is now in his 60th year. His son, Mr. F. J. Golding, who has been representing the same firms for some years, hopes to cover some of his father's ground.



[*Photo. by Photox Co.*

MR. G. F. GOLDING.

The Chemical Exhibition.—Although chemistry and ceramics are so elosely allied, there were only two exhibits likely to interest our readers at the Chemical Exhibition held at the Agricultural Hall, Islington, N., from June 14 to 28. The first of these was that of the North Cornwall China Clay Co., Ltd., whose stand came in for unusual notice by reason of the operation of a working model of a china clay pit, illustrating every stage of the process of china clay mining. It showed how the clay is picked on the "stopes" by the men, and turned into the streams of water flowing to the sand pits; how the water with the clay in suspension is pumped again to the surface to be directed through "micas" to the settling pits, and the various processes through which it passes before reaching the "dry." The model, which it is understood was made by a Cornish schoolmaster, is a most ingenious one, graphically describing the work done in a clay pit, and there is no doubt that its operation at the Exhibition in question was calculated to cause visitors to pause at the stand, and thus result in their examination of the samples of the china clay in all its processes of evolution from crude to refined, which were simultaneously shown on the stand. The second exhibit which will be of interest to the readers of this journal was that of Doulton & Co., Ltd., Lambeth, who exhibited a capital assortment of stoneware for chemical and electrical processes. The selection included a nitrating pan, a silicon tray, a guncotton pot and cover, a very large rectangular tank for chemical mixing, a gold copper for refining gold, a chemical copper for mixing purposes, shallow mixing pans in various sizes

om 24 gals. down to 10, registered hermetically sealed rs, acid jugs from a pint to ten gallons, acid funnels in variety of shapes, store jars, with and without tap les, in various sizes, to contain from 1 to 100 gals., ecial poison jars and many other accessories directly interest to the chemical trades. It was an exhibit monstrative of the multiplicity of uses to which earthenare utensils can nowadays be put.

The Shops Act.—At Southend-on-Sea the Town Council, June 4, issued an order exempting glass and china alers from half-day closing from June 15 to Sept. 30 clusive, and during the two weeks immediately preding the week in which Christmas Day occurs.——rders have been issued for glass and china dealers at Runrn and Nantwich to close each Wednesday at 1 p.m. —Orders have been issued for Tuesday closing at 1 p.m. y glass and china dealers at Barnston, Gayton, Heswall, by, Pensby, Thingwall and Thurstaston (Cheshire).——evon County Council have issued orders for closing as nder for all non-exempted trades :—Hartland, Tuesday at p.m. Bampton, 8 p.m. on Monday, Tuesday, Wednesay, and Friday ; 1 p.m. on Thursday, 9.30 p.m. on Saturay. Lynton and Lynmouth, May 1 to Sept. 30 inclusive, onday, Tuesday, Wednesday, and Friday, 8 p.m. ; hursday, 1 p.m. ; Saturday, 10 p.m. ; Oct. 1 to April 30, onday, Tuesday, Wednesday, and Friday, 7 p.m. ; Thursay, 1 p.m. ; Saturday, 9 p.m. Moretonhampstead, onday, Tuesday, Wednesday, and Friday, 7 p.m. ; hursday, 1 p.m. ; Saturday, 9 p.m.——Isle of Wight unty Council have issued orders, in which glass and china alers are included, for Wednesday closing at 1 p.m. at onchurch, Brading, Brighstone, Calbourne, Gatcombe, odshill, Newchurch, Niton, Northwood, and Wroxall ; d for Thursday at St. Helens, Bembridge, Binstead, arisbrooke, Chale, Freshwater, Horsebridge Hill, South rreton, Totland, Whippingham, Whitwell, and Yarouth.——Glass and china dealers at Cheriton (Kent) ve been granted exemption from half-day closing on ednesdays during June, July, August and September.——ucks. County Council have fixed Thursday as the early sing day at Quainton.——At Bamburgh (Northumberd) half-day closing has been suspended from June to ptember inclusive.——Middlesex County Council have ade an order for glass and china dealers at Friern Barnet close on Wednesdays at 1 p.m.——For glass and china alers at Stourbridge a draft order has been issued by the orcestershire County Council, and provides for closing 8 p.m. on Monday, Tuesday, and Wednesday ; at 1 p.m. 8 p.m. on Thursday ; at 8.30 p.m. on Friday, and at p.m. or 1 p.m. on Saturday. On the day before Good iday the closing hour is to be 8 p.m. ; half an hour's tension is granted for the Monday, Tuesday, and Wedsday before Easter, and an hour on the Saturday ; and the six weekdays before Christmas Day the closing ur is to be 11 p.m.——Swanage glass and china dealers ve been granted exemption from half-day closing during e summer season by the Dorset County Council.——ling Town Council on June 12 issued a confirmatory der for glass and china merchants to close each Wednesy throughout the year at 1 p.m.——Bexhill-on-Sea wn Council have granted glass and china dealers exption from half-day closing during July, August, ptember, and December of the current year.——Lancs. unty Council have made an order for glass and china alers at Horwich to close each Wednesday at 1 p.m. —Ramsgate Town Council have suspended half-day sing on Thursdays for glass and china dealers until the d of September. —— An order to be made by the edgar Urban Council fixes the hours of closing by glass d china dealers as under :—Monday, Tuesday, and ednesday, 7 p.m. ; Thursday, 1 p.m. ; Friday, 7.30 p.m. ; Saturday, 10.30 p.m.——Burnham (Somerset) Urban Council after taking a vote of the glass and china dealers, have decided to make no closing order, there not being the requisite majority in favour.——Colwyn Bay Urban Council have made an order suspending half-day closing for glass and china dealers from July 14 to Sept. 30, and during Easter Week, Whit Week, and Christmas Week, and the week preceding in each instance.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette," and are strictly copyright.

Mr. J. O'Beirne has opened a glass and china business at Cross-street, Holywell.

Mr. Dan Easton has opened a new china store at 124, High-street, Sittingbourne (Kent).

Richard Green & Sons have removed from 31, St. Bride-street to 95, Hatton-garden, E.C. Their new telephone number is Holborn 1310.

Mr. David Nestle, of 7, Hatton-garden, E.C., agent for Villeroy & Boch, is removing early in July to new premises at No. 100, Hatton-garden, E.C.

Mrs. Sandland announces that she is relinquishing the glass and china business she has carried on at 118, Lichfield-road, Aston Manor, near Birmingham.

The Barnsley Town Council have passed plans of new business premises to be erected in Shambles-street for Harral's Stores, Ltd., glass and china dealers.

Mr. E. T. Fiddes has acquired the old-established business of Mrs. F. M. Wait (late Wearing), glass, china, earthenware, and stoneware merchant, 16, Bird-street, Lichfield.

Mr. John Thompson, glass and china dealer, Kendal, is having the premises known as the Dolphin Cocoa Rooms converted into business premises, with a modern shop front, for his use.

H. Rock & Son have removed their export department from Glebe-buildings, Stoke-on-Trent, to Kearsley Chambers, Shelton Old-road, Stoke-on-Trent, which are more commodious premises.

The China and Glass business of Mr. S. J. Kepple (of which Mr. Robert R. Bray is manager) is being removed, owing to the sale of the premises, from Clare-street and Stephen-street, Bristol, to new premises in the City: Mr. Bray announces that opportunity will be taken to discontinue the fancy and ornamental part of the business, and this portion of the stock was disposed of by auction on June 20.

NEW COMPANIES, COMPANY REPORTS, &c.

Scotia Bank Fireclay Co., Ltd.—This private company has been registered with a capital of £12,500 in £1 shares. Objects : To take over the business of marl and clay workers carried on by A. H. Thompson, F. W. Goodall, and R. C. Dobson, at Burslem, Staffs.

Corner & Co., Ltd.—Registered capital £5,000 in £10 shares. Objects : To acquire from T. Koerner the business of luminous and glass sign-making carried on at 83, St. Paul's Churchyard, E.C., as Corner & Co., for £4,930, in shares. The first directors are A. Muller and C. Grombach.

Doyle, Ltd.—Registered as a private company with capital of £2,500 in £1 shares. Objects : To act as glass and china merchants, manufacturers of earthenware or stoneware, &c., and to acquire the business carried on at 59, Boar-lane, Leeds, as Doyle. Mr. S. B. Doyle is to be permanent governing director.

Fred Payton & Co., Ltd.—This private company has been registered with a capital of £5,000 in £1 shares (3,000 preference) to carry on the business of hotel and caterers' outfitters, glass, china, and general merchants, &c., and to

adopt an agreement with Fanny L. Payton. Registered office, 42, Livery-street, Birmingham.

Standard (Cwmbran) Brick Co., Ltd.—Registered capital, £3,500 in £1 shares. Objects: To take over the business of clay workers, brick, tile, and terra-cotta manufacturers carried on at Cwmbran, Monmouth, as the Standard (Cwmbran) Brick Co., together with the lease of certain lands, buildings, and other property. Private company.

Wrexham Brick and Tile Co., Ltd.—This private company has just been registered with a capital of £2,000 in £1 shares to take over the business of a manufacturer and dealer in bricks, tiles, clay, terra cotta, and other earthenware articles, carried on by W. Whittingham at King's Mills, Wrexham, as the Wrexham Brick and Tile Co. The first directors are T. B. Taylor and W. Whittingham.

Anglo-French China Clay Co., Ltd.—(R.C) £30,000. (v) £1. (o) To acquire from the Armorela Syndicate, Ltd., and work and develop freehold china clay ground including brick and tile works and manager's house at La Trinité-sur-Mer, Morbihan, France, and adopt an agreement with said syndicate and the liquidator thereof. (R.O) 2, Broad-street-place, E.C.

Alfred Alexander & Co., Ltd.—This private company has been registered with a capital of £1,000, in £1 shares. Objects: To take over the business of glass bottle manufacturers carried on by G. E. Alexander and E. Alexander, at Hunslet, Yorks, and at Southwick and Blaydon, Durham, as Alfred Alexander & Co., and to adopt an agreement with the United Glass Bottle Manufacturers, Ltd. G. E. Alexander (chairman), E. Alexander and P. Gold are the first permanent directors. Registered office: 85, Gracechurch-street, E.C.

Doulton & Co., Ltd.—The report for last year states that the directors are glad to report a very appreciable increase in profits on the year's trading, so that the adverse balance of the previous year has been wiped out and a substantial sum on the right side is left, which they recommend carrying forward to the current year. The profit on trading for the year, after providing for depreciation on buildings and leaseholds and for bad and doubtful debts, amounted to £41,385. The debit balance brought forward amounted to £9,782, directors' and trustees' fees totalled £2,600, the amount written off goodwill was £500, debenture interest absorbed £14,000, and depreciation of investments £711, leaving a credit balance of £13,842, which is to be carried forward.

Liens, Debentures, Satisfactions, &c.—Carnsmerry China Clays, Ltd., Plymouth.—Registered £10,000 first debentures secured by trust deed, charged on benefit of a certain agreement and also a general charge.——United Glass Bottle Manufacturers, Ltd., London, E.C.—Registered trust deed securing £200,000 debenture stock; charged on covenant to convey various freehold and leasehold properties, and to transfer shares of certain subsidiary companies, also a general charge, except uncalled capital.——South Wales (Siemens Patent) Glass Manufacturing Co., Ltd., Newport (Mon.).—Registered, £2,250 debenture, part of £12,000; secured by general charge.——Goodwin (George) & Son, Ltd., Hanley.—Registered, charges securing £350 and £13 annuities to Mrs. C. Goodwin, Bella Vista, Longsdon, Stoke-on-Trent, and Mrs. S. E. Nancarrow, Blackpool, respectively; secured by general charge.——Cornish Kaolin Ltd., London, E.C.—Registered, £2,000 debentures, part of £25,000; general charge.

TENDERS ACCEPTED.

For the Hastings Board of Guardians:—Rathbone & Co., crockery.

For the Brighton Union:—Earthenware, 12 months, Mr. Schofield, East-street, Brighton, £153 13s. 2¼d.

For the Birmingham Education Committee (recommended for acceptance):—Holliday, Son & Co., Ltd., crockery.

For the Paddington Guardians (recommended for acceptance):—Earthenware, Shorter Bros, £223 11s. 3½d.; glass, Mr. W. Huntsman.

For H.M. Government (contracts let during May):—War Office: Chinaware, Doulton & Co., Ltd., Burslem; A. B. Jones & Sons, Longton. Window glass (term contract), Pilkington Bros., Ltd., St. Helens. Crown Agents for the Colonies: Insulators, porcelain, Bullers, Ltd., 6, Laurence Pountney Hill, E.C.

For the Metropolitan Asylums Board (recommended for acceptance):—China and earthenware: A. E. Gray & Co., Glebe Works, Hanley, 1 item, £8; J. Wilson & Sons, Park Works, Fenton, 5 items, £130; W. Adams & Co., Tunstall, £210 and £401. Glass: Molincaux, Webb & Co., Ltd., Kirby-street, Ancoats, Manchester, 3 items (bulk supply), £40; Burtles, Tate & Co., Portland-street Glass Works, Manchester, 1 item (bulk supply), £45.

CONTRACT OPEN.

Apparatus for Lighthouses.—H.M. Ambassador at Madrid reports that tenders are invited by the Central Spanish Lighthouse Service for the supply of optical apparatus and lanterns for the Salvora Island and Cape Corrubedo lighthouses. Tenders will be received up to Aug. 15 at the "Servicio Central de Señales Maritimas," Madrid, whence copies of the specification and form of tender may be obtained. Local representation is necessary.

Foreign Notes.

The Chinaware Export of Kiukiang amounted last year to 52,006 cwt., as compared with 71,131 cwt. exported in 1911, and 78,308 cwt. in 1910.

Pottery in the Cape Verde Is.—The clay of Boa Vista and Maio is said to be very suitable for pottery. There is a factory at Boa Vista where tiles, bricks, flowerpots and earthenware vessels used to be turned out.

Hollow Glassware of natural colours to the value of £272,300, the weight being 31,223·6 metric tons, was exported from Germany during the first three months of the current year. The totals show a marked advance.

The Dresden Glass Industry.—A British Consular Report states that the demand, especially for better quality goods, was brisk in 1912 and selling prices rose; yet total results were unfavourably affected by the increased prices of raw material and by higher wages.

New Norwegian Brick and Tile Factory.—According to a U.S. Consular Report, a $56,000 corporation has been organised to erect brick and roof-tile kilns on Jaederen Island. A clay particularly suitable has been discovered, and if the first plant proves successful the industry will be greatly extended. A quantity of the clay sent to Copenhagen was found by tests to be of high quality.

Domenican Glass and Earthenware Imports.—The import of glassware into Domenica during last year was valued at £8,565, being about up to average. Germany and the United States are the chief sources of supply. The imports of earthenware and china, principally from Germany, show a large increase, and there should be an opportunity for British exporters to compete in this growing market.

The Production of Bauxite in the United States in 1912 was 159,865 long tons, valued at $768,932. Compared with the output in the preceding year these figures represent an increase in quantity of 4,247 long tons, or 2·7

per cent., and in value of $18,283, or more than 2·4 per cent. The average price of the ore per long ton at the mines for the last three years has been :—1910, $4.81 ; 1911, $4.82 : 1912, $4.81.

Earthenware Pipes wanted in Uruguay.—H.M. Vice-Consul at Montevideo reports that a constructing engineer in that city is desirous of receiving catalogues and price-lists from United Kingdom manufacturers of drainage and water pipes of earthenware. The name and address of the engineer in question may be obtained by manufacturers in the United Kingdom on application to the Commercial Intelligence Branch of the Board of Trade, 73. Basinghall-street, E.C. Any further communications should be addressed to the British Consulate-General, Montevideo, mentioning THE POTTERY GAZETTE.

Dutch Earthenware and Glass Trade.—A British Consular Report from Rotterdam states that the manufacture of Gouda pipes is still very important and reached a figure of 12,500,000 in 1908. About 60 per cent. of the total is exported. China or pottery articles sent abroad during the year 1909, amounted to 14,500,000 kilos., valued at about £416,000. Earthenware pipes are principally manufactured for home consumption, and only small quantities find their way abroad. Large imports from the United Kingdom. Glass (window glass) was not manufactured in the Netherlands until 1910, when a large factory with up-to-date appliances was established. Almost all is imported from Belgium. The bottle factories produce about 70,000,000 bottles, of which total 20,000,000 bottles are destined for export.

German Porcelain in America.—The report of the Erfurt Chamber of Commerce states that the porcelain works in that district chiefly produce fancy wares, which are mainly sent to North America. The disturbed state of business, consequent on the holding of the Presidential Election, had an unfavourable effect on the demand ; and this circumstance, coupled with the increase in the prices of raw materials and wages, and without any possibility of raising the selling prices, made matters very difficult for manufacturers. Not much is anticipated from the projected lowering of the American tariff ; but since the election the demand has revived, and the prospects for the current year are regarded as favourable. On the other hand, Japanese competition is growing in the American market, and the importation of German ware has to face the improved goods now turned out in American potteries.

French Exports of Flint Pebbles.—Seashore pebbles, or "galets de mer," to the weight of 259,498 cwt. were exported from Havre last year, as against 246,303 cwt. in 1911. In the report for 1911, which we reprinted, it was stated that in 1911 the total of 13,793,000 kilos. was exported from Havre, but details were then not available as to the destination of the amount. The figures now published show that 8,921,100 kilos. went to the United States, 1,877,200 kilos. to Mexico, 530,300 kilos. to the United Kingdom, an equal amount to Germany, and the rest to Belgium, Cuba, and New Caledonia. In his previous reports H.M. Consul mentioned that there was a considerable business in these flints at Tréport and at Dieppe. He now learns that the Government both at Dieppe and at Tréport consider that the export of such quantities of pebbles hastens coast erosion, and in consequence the amount the authorities allow to be picked is limited to 3,000 tons per annum at Dieppe, and this in consequence of the pleading of the poor families who derive their living by picking pebbles. At Tréport a diminution in exports is anticipated, as the municipality of the adjoining town of Mers have decided that no more shingle shall be removed from the beach. At Etretat a certain quantity is picked. The pickers are paid about 3 fr. a day. Pebbles are sent by sailing vessels probably to the United Kingdom. They are also sent by rail to Havre. There are no means of ascertaining the quantities picked at Etretat. H.M. Vice-Consul for Tréport and Eu reports as follows :—Some diminution in the export of flints from Tréport may now be expected, the municipality of the adjoining town of Mers having decided that no more of this shingle shall be removed from the beach. The resolution was taken in consequence of the increasing damage done to the sea wall during north-west gales, coinciding with spring tides. The accumulation of flint pebbles at the base of the wall is now held to be desirable at Mers as a natural rampart against the sapping action of the sea.

Government Inspection of German Glassworks.—The recently issued report of the Prussian factory inspectors deals largely with glassworks. From the age statistics it appears that nearly 23 per cent. of the total workers are between 16 and 19 years of age, and 29·16 per cent. between 20 and 29 years, 15·2 per cent. being below 15, 11·76 per cent. between 30 and 34, and 8·94 per cent. between 35 and 39 years, above which limits the proportions are very small. Whereas in the case of the sheet glass industry, only about 1·47 per cent. of the workers at the furnaces are juveniles, the proportion is much higher (18·66 and 13·12 per cent. respectively) among furnace workers and cutters in the hollow glassware industry, where the work is less arduous. The same cause operates against the employment of men over 55 in the plate glass industry, the proportion being less than 1 per cent., as compared with an average of 4·07 per cent. in the industry as a whole. With regard to the hours of labour, the inspector for the Cologne district reports that the introduction of the 8-hours day at the Brühl glassworks, on the instigation of the workpeople, has not turned out satisfactory, owing to the unpunctuality and neglect of the hands. A case is reported where children who carried their parents' meals into the works were induced by the men—unknown to the management—to work at the furnaces for as much as four hours at a time. The low proportion of workers above 40 years of age in the glass cutting industry is accounted for by the inspector of the Breslau district, by the statement that these workers inhabit the mountain regions round Glatz and from constant intermarrying are degenerating, drunkenness being also prevalent, and housing accommodation very scanty. The workrooms are stuffy and crowded, thus increasing the unhealthiness of the occupation. In many cases, too, the sanitary arrangements are exceedingly defective, but of late new regulations have been issued for improving the conditions under which work is carried on, so that the workers run less risk of chill through exposure to the outer air while very hot and scantily clad. The prevention of accident and disease is closely watched, and the regulations issued with that object are strictly enforced. In one small glassworks near Düsseldorf five cases of arsenic poisoning were discovered in spite of the prohibition of the use of that substance ; and the establishment was closed, the proprietor being unwilling to observe certain other stipulations in his concession. In the Breslau district much benefit has resulted from the introduction of mechanical means for removing dust from glass cutting shops. At one glassworks in the Berlin district, plant has been erected for cooling the air round the furnaces, so that a cold draught is provided for each glass blower, and two other installations for the same purpose are in use in the Bromberg district. In the Cologne district, hollow glassware is made at one works by the aid of compressed air ; and in order to cool the air near the machines, the connection between the air pipes and machines is established by means of canvas bags, which allow a certain amount of the air to escape into the room and cool same without setting up any inconvenient draught.

Fragments.

¶ A Sheffield subscriber writes :—"We think your Gazette of the last few months an improvement on your already high standard." This appreciation shows that our friends the "Blades" are as keen as ever to know a good thing when they see it.

* * *

¶ This is quite an exhibition number (see pp. 785 and 800). But experience is evidently showing manufacturers that trade journal advertising is the cheapest and surest means of obtaining business.

* * *

¶ Our special campaign for United States subscriptions is bringing in good results. By a single mail our representative sent us nine new subscriptions from one particular district.

* * *

¶ In connection with the numerous congresses that are being held at the Ghent Exhibition (p. 800), we are told on good authority that they are to include a congress of the Deaf and Dumb and even a "Congrès des Morts."

* * *

¶ An illustrated article on hyacinth-growing in glasses, in a certain gardening handbook, says: "The glasses are now made of various shapes, but the most tasteful are those illustrated in the figure herewith, in which A is the glass and B the bulb." Was the drawing so indefinite or was there a fear of confusion with an electric light bulb ?

* * *

¶ At Bradford recently several women were fined sums of from 2s. 6d. to 10s. for taking coal from carts as they left the coal drops. A police officer said that the women collected coal into their aprons, which they emptied into sacks, and he found twelve sacks belonging to a number of women and children on the date named. There would be 7 cwt. or 8 cwt. ready for carrying away. What would the "coal gleaners" of the Potteries say if they were brought to book in this manner ?

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¶ The following is given by an American glass trade paper as a copy of a letter from a firm in eastern Pennsylvania. A customer who had a contract with said firm and was in a hurry, wrote as follows :—"Dir Sar—I rut yu awikago to send mi dem bels of dem bottils raduce and I never hort from yu badam also argrimitt was mat to hae ol of dem bottils shipt di fust of Jun no I rut yu lader dat I nid Dem Bottils and yu Dint Send Dem yet also Plis Lat mi ni bi riturin mal if yu goan scndem or not bi Kos aem shurt of bottils if yu hewin ship Dem Yet Plis ship dem adwons and ob laget, Yours Truly, ———" "Ancar Raduve." The above letter after several hours of studying was translated :—"Dear Sir,—I wrote you a week ago to send me the balance of them bottles right away and I never heard from you about them. Also agreement was made to have all of them bottles shipped the first of June. Now, I wrote you a letter that I need them bottles and you did not send them yet. Also please let me know by return mail if you are going to send them or not because I am short of bottles. If you haven't shipped them yet please ship them at once and oblige, Yours truly, ———" "Answer right away."

"Ceramicus."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(from our own correspondent.)

A MORE cheerful condition of affairs prevails in the Potteries than obtained a month ago. It is true no appreciable improvement in trade demand can be recorded, but all the labour disputes have been settled, and manufacturers and employees are once more working harmoniously together. Last month we were able to record the end of the protracted strike in the jet and rockingham trade, and very early in June the other two disputes were brought to a conclusion, greatly to the satisfaction of all concerned. Now, all that is needed is a brisk call for pottery goods, in order to put employers and workpeople in the happiest frame of mind. That, of course, is more easily hoped for than realised, but the fact of there being no material improvement at the present is no real cause for pessimism. In the busiest periods the demand generally falls off as the August holiday approaches, and factories are chiefly occupied in clearing up the work already on hand, so that the present sluggishness of business does not necessarily signify as to the future. Most manufacturers are, indeed, hopeful that the second part of the year will show a much better turnover, for the six months now ending has been a disappointing one, following on last year's brisk and buoyant trade.

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Some firms admit that they have not much to complain about at the present time, and that they will go on working steadily up to Stoke Wakes holiday, but they are the exception rather than the rule. A manufacturer remarked to me recently that when July was ended there would be very few indeed who could say they had worked full time for the preceding three months ; in fact, he said, the average at the present and for some time past was 4½ to 5 days per week. From all I can learn the china manufacturers are busier than those in the earthenware departments, but in neither trade is there anything approaching to buoyancy. Exception, however, has to be made in regard to high-class and expensively decorated china, for which there is a very satisfactory supply of orders. The sanitary ware business continues good, and now that the strike is ended, the jet and rockingham factories are displaying considerable activity, but in this instance there is, of course, much leeway to be made up, for a nine weeks' stoppage makes a serious gap in the round of production. A gentleman engaged both in the china and earthenware business gave me a very doleful view of the existing state of trade. The chief complaint is with regard to the home demand, but he asserted that the apparently satisfactory total of exports was misleading, and did not reflect the true position of affairs. A considerable part of the shipments, he averred, consisted of goods made under old standing orders, which were received during the very brisk period and before selling prices went up to their present standard. When plenty of good business was coming to hand these were neglected, but now they were being executed, not because they would bring profit, but in order to keep factories going at something like a steady rate.

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Various views exist as to the cause of stagnation in business. It cannot be said that trade generally is bad,

so other reasons have to be sought for. One opinion is that during the period of activity that followed the coal strike dealers overbought themselves, but by this time they should certainly have disposed of surplus stock. Another reason held by many is that demand has been affected by the very necessary increase in prices. "People," observed a manufacturer, "can do without crockery for a considerable time longer than they can do without most commodities, and when they find prices higher they say they will wait." There is no doubt that the higher prices are having an effect on trade, and some fear that they are driving business abroad. The Continental manufacturers certainly are having a "pull" over English makers, for their cost of production has not risen proportionately. Their materials, and particularly their fuel, have not advanced in price as ours have done; they have not had a recently-introduced Insurance Act, and they have not the expense of putting into operation elaborate industrial regulations. But even if enhanced prices are affecting demand for the moment, there should be no relaxation. Manufacturers, with all their increased expenditure, cannot afford to put goods on the market at anything like the old figures, and a lesser trade at a profit is better than a bulky turnover with little or no profit. Moreover, the quality of English wares must eventually tell. The superiority of our pottery has been long recognised, but it has been so emphasised by the incidents associated with the Royal visit and the recent exhibitions, that everybody in almost every market must realise that English ware is the desirable thing, even at enhanced prices.

Yet another reason is advanced for the decline in business, and though it may be regarded as novel, there may be something in it. It is that people are not furnishing their houses—and incidentally providing themselves with crockery—as they used to do. They are spending so much on various forms of pleasure, including motor-cars in the case of the well-to-do, that expenditure on household requisites or luxuries is reduced to a minimum. If this is a serious contributing factor, it is difficult to know how to combat it, unless this can be done by constantly bringing under people's notice excellent and tasteful pottery. Then they may be induced to realise, as of old, that a real pleasure is to be found in the possession, both for utilitarian and decorative purposes, of fine ceramic wares. In this direction much has already been done in the way of exhibitions, and more is contemplated. The display of ware at Stoke during the Royal visit, and the subsequent exhibitions in London and Liverpool, have led to a proposal to make it an annual event—at least so far as the Potteries is concerned. The suggestion is to bring together each year a representative display of the district's latest products and to invite buyers to attend and give their orders. Presumably the promoters do not fail to realise that buyers may see the district's products at any time by visiting the firms' showrooms in London or in the Potteries, so that a collective exhibition will need to offer very special attractions to be of any use.

There is no doubt that the settlement of the jet and Rockingham trade strike had a favourable effect on the two other disputes—that in the marl trade, which affected over a thousand workers, and that in the cane-and-white sanitary industry—for the end of these followed soon afterwards. With regard to the first mentioned, representatives of the Marl Owners' Association and of the Navvies and General Labourers' Union met in conference for the first time on June 2, and though the negotiations extended over some hours, a settlement by means of compromise was effected without very great difficulty. This fact makes all the more regrettable that a meeting of the parties did not take place earlier, for a conference in the early stages of the dispute might have ended with like results. Mr. John Ward, M.P., as representing the men, met the masters in a commendably conciliatory spirit, which the employers reciprocated, and so a strike which had caused much distress and considerable inconvenience and expense to pottery manufacturers was brought to a termination after seven weeks' duration. The men's demand was for an increase of ½d. per hour for marlhole men and the following further concessions:—Piece-workers: Increase equivalent to ½d. per hour. Gangers and foremen: Increase of 2s. 6d. per week. Firemen round kilns at night: To be paid by the hour, 6d. to be the minimum. Overtime: Time and a quarter for all overtime at nights; time and a half for Saturday afternoons; double time for Sundays. The terms of settlement were an increase of a farthing an hour to marlhole men forthwith, and an additional farthing in October next, ultimately bringing up the rate of wages to the 6d. per hour asked for. In addition, the men were conceded time and a quarter for overtime, the agreement to operate for three years. Further, the parties agreed to work together to maintain prices, realising that any further increase in wages depended upon the price at which marl would be sold. They accordingly consented to form a Joint Defence Board, the object of which is to assist mutually in maintaining prices and keeping out unfair competition.

The dispute in the cane-and-white sanitary trade was brought to an end on June 4 after many conferences. Six of what may be termed smaller firms and 120 workmen were involved, the operatives' demand being that their making prices should be brought up to the standard of the larger firms. The Manufacturers' Association was not concerned in the dispute, but the men were supported by the Potters' Union. Considerable concessions were made by the employers at the meeting held on June 4, and these were accepted by the men, work being resumed on the following day after a stoppage of more than ten weeks. Under the new terms the workers in all grades of the cane-and-white sanitary trade receive a substantial advance, and although the fuel demands of the operatives were not conceded, the principle of a minimum wage was granted. One of the most important conditions of the agreement was a modification of the apprentice system. Any firm employing apprentices will not be allowed to pay less than the minimum wage provided for in the agreement for journeymen.

The present year will form an epoch in the history of the potting trade—the commencement of a new era of progress. Manufacturers have shown the high artistic and technical qualities of their ware by means of the exhibition of pottery to a very wide public, which became all the wider because of the interest displayed by the King and Queen. Now the employers have shown to the whole country that their concern is not only for the excellence of their manufactures, but also for the good health and general well-being of those who produce their goods. The phrase of Mr. Ellis Griffith, who opened the Pottery Trades' Requirements Exhibition, that it was a "pioneer exhibition," was an apt and deserved compliment to the pottery manufacturers. They have set an example to the whole of the industries of the country by organising, for the first time in trade history, an exhibition having for its sole object the efficient carrying out of industrial legislation. There is no doubt that the new Pottery Regulations are a landmark in Government

control of conditions of manufacture; never before have rules so elaborate been drawn round an industry, and probably never before has industrial legislation been accepted so whole-heartedly. Manufacturers are determined to carry out the new regulations, not only in the letter, but in the fullest possible spirit, so that in the not very distant future it will be possible to say that a trade which was once fraught with dangers has become as healthy and innocuous as any industry in the country. But employers cannot do everything; much rests with the operatives. The latter must not only carry out their part of the rules in the literal sense, but they must also give attention to that personal element which Dr. Legge in his lecture so largely emphasised. With them, perhaps, more than with the manufacturers, rests the not very difficult problem of "How to keep fit."

The exhibition, which has been held at Stoke during a fortnight of the past month, is fully described elsewhere in this issue, and the lectures in connection with it are also reported. The intention here is, therefore, to call attention to one or two matters which appear to be worth emphasising. In visiting the King's Hall, one could not fail to be struck by the immense work which had gone to the organising of the exhibition. The Manufacturers' Joint Committee, and Mr. Wm. Burton in particular, had bestowed immense labour and thought in order to make it so splendidly representative, and exhibitors had spared neither expense nor trouble in equipping their stands to show how well their machinery and appliances were suited to the problems that are being solved in the workshops of the Potteries. A noteworthy feature was the number of local engineering firms exhibiting, showing that the district which makes the pottery also produces the machinery and appliances for its manufacture. Many months of work must have been bestowed on the designing of plant suited to the purposes required. Exceedingly interesting was the collective exhibit of the Joint Committee of Pottery Manufacturers. This showed that the employers in many instances had forestalled the rules, and as the result of much labour, great ingenuity, and very considerable expense, had solved for themselves many of the problems which the new rules set up. Several of these exhibits came in for very complimentary observations at the lectures. There is no possible doubt that the exhibition has been an immense success. Pottery manufacturers have found it to be of great value, and the exhibitors are likely to profit considerably. A few days after the opening I heard from some of the exhibitors that they more than recouped themselves for their expenditure, and had quite a bookful of promising inquiries to follow up.

One of the most important features in connection with the exhibition has been the series of lectures arranged by the Joint Committee. Two of them, given by Mr. Wm. Burton, M.A., F.C.S., chairman of the Joint Committee, were specially intended for manufacturers. The third, given by Dr. T. M. Legge, H.M. Medical Inspector of Factories, was more particularly addressed to the operatives, and every worker in the Potteries should study and take to heart his highly valuable health hints.

There is no limit to the burdens which are being placed upon the manufacturing community. Increased railway rates are to be accompanied by enhanced canal rates, and property assessments have also been increased. The question of railway rates was this month discussed by the North Staffordshire Chamber of Commerce, and referred to the Railway Rates Committee, and since then a conference of Midland Chambers of Commerce has discussed the matter and submitted a series of resolutions to the Board of Trade and members of Parliament. The effect on North Staffordshire, direct and indirect, is likely to be serious. According to a statement by Mr. S. W. Wheatley, the advance proposed by the local railway company is 4 to 5 per cent., but already the rates are much higher than in other districts. As a general rule, potters are paying 25 per cent. in excess of the rates in other areas, and in some instances as much as 50 per cent. in excess. The effect of an increase, under these circumstances, will be very serious, because, being on a scale, there will be not only the scale rate, but also the differential rate which traders suffer from as compared with other districts. Consequently, said Mr. Wheatley, the rise will not be 4 or 5 per cent., but, compared with other districts, 6 or 7 per cent. The Crate Manufacturers' Association have also considered the matter, the prospective increase in their case being very heavy owing to the distance over which much of their raw materials is brought. The Association have decided to apply for inclusion under the exemption clause. Unless they are successful, the increased railway rates in their case are likely to be reflected on the pottery manufacturers by means of a reduction in discounts on crates supplied.

It is not surprising, but none the more welcome, that an advance in canal rates is to accompany the increased railway charges. Notice has been given by the Anderton Company, Ltd., and the Mersey, Weaver and Ship Canal Carrying Co., Ltd., who are carriers by water between the potteries and Liverpool, Birkenhead, the Upper Mersey Ports and Manchester, that "owing to increased expenses and advances in certain tolls, their rates of carriage will be revised from July 1." On the top of these burdens, as I have indicated, are increased property assessments. The Unions of Stoke-upon-Trent and Wolstanton and Burslem, which cover the whole of the Potteries district, have recently carried out a revaluation of their areas, and, as is customary, considerable advances in assessments are the result. The rates of the district are abnormally high, and with no prospect of their reduction, but rather of some increase, advanced assessments are serious matters to an already overburdened industry.

The new Central School of Science and Technology at Stoke will not be fully completed before the New Year, but parts of it will be ready for occupation in September, and the new session's work of both the pottery and mining classes will be commenced in the new school. The question of appointing additional teachers has been deferred until the buildings as a whole are completed. Dr. Mellor, the principal of the pottery classes, has received another honour. For a second time he has been invited to give a short course of lectures at Illinois University in September. but has declined the invitation, as he did the former one, owing to the demands on his time in connection with the new school.

The administration of the Insurance Act is providing many difficulties and problems, and at the last meeting of the Stoke-on-Trent Insurance Committee there were many complaints of malingering, so much so that it was decided, with the consent of the Insurance Commissioners. to appoint a medical referee for the examination of doubtful cases. The representative of one approved society stated that their sick pay was 50 per cent. more this year than last. In another society the payments were said to be double those of 1911. Much amusement was caused by the story of a potter who, when on the way to work, was told his moulds were not ready. Thereupon he went to his doctor and placed himself on sick benefit. The statement may be true or otherwise, but there seems

no doubt that an undue number of sick claims have accompanied the coming into operation of the Act. This, however, is not peculiar to the Potteries; a similar state of affairs is said to exist in all industrial districts. A welcome announcement was made at the same meeting to the effect that the income for sanatorium benefit for Stoke-on Trent would be £1,000 more than was at first anticipated.

Mr. T. C. Moore, of Hanley, has been appointed British Juror for Pottery, in connection with the Ghent International Exhibition, and Mr. Bernard Moore has been appointed President of the Jury for Pottery (Class 72). The first meeting of the International Jury takes place on June 30.——Mr. Charles D. Grimwade, son of Mr. L. L. Grimwade, has accepted a position as manager of a pottery and brickworks near Tientsin, China, and leaves England in a fortnight's time by the trans-Siberian route.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

ALTHOUGH of late years, in the pottery and glass industries of Scotland, the spectacle of works shutting up has been all too common, there is, it appears, to be an example to the contrary. Proposals have been definitely made during the month of June for the starting of a new pottery works somewhere in the east-end of Glasgow. There is nothing very ambitious about the projected venture, for the capital aimed at is certainly quite modest; but, as an industrial phenomenon (in connection with the pottery works' outlook in Scotland), the proposal is interesting. Steps have been taken to form a joint stock company. The projected new pottery is not intended for the manufacture of ware of the general or miscellaneous kind, as the output, at the first at least, is to be confined to ware in demand for consumption in the great fruit preserving industry, being principally jam and jelly jars. The demand for this kind of ware increases from year to year, while the supply to the preserve works is sometimes behindhand.

Business during June amongst the retail houses of the cities and other permanent centres has been showing up a moderately fair volume for this particular part of the year. This has been partly due to the household needs, in crockery and other like ware, following on the chief term in Scotland for the removal from one dwelling to another, or, as the case may be, for entering upon occupancy for the first time, the term falling in just at the close of May. Business, also, has been helped by the weather, particularly during the second half of June, which has become rather more seasonable; and the general turn-over, as regards the retail houses, would have been good on the whole if there had not been so many industrial strikes on the Scottish field all at once, with concurrent suspension of wage circulation. Up to now, the retail houses have felt but little the influence of the summer migration of families to coast and country, for the season has been so belated, and the winter inclemency has been so protracted, that this year the annual migration referred to has been set back by common consent to the extent of a period running into weeks. Retailers at the coast places and other summer resorts are in like consequence finding themselves belated in the commencement of their annual extra push of business; but warm weather has come at last, the migration has now definitely begun, and the season may turn out not a bad one after all. Everything depends on the behaviour of the weather from now to September.

Reports from the wholesale houses indicate the continuance of a moderately fair run of orders from customers during June, following on the experience of May, and with, perhaps, some little further improvement. The call for glassware seems to have been somewhat marked during June, not only for the supply of the coast and country resort needs, but also as regards the ordinary requirements of the cities and towns. In china and earthenware lines the demand has not been so marked, but not so bad after all, especially when the retarded condition of the season is held in consideration. Matters generally have been entering perceptibly on improvement as June draws to a close, and the expectation is likely that the month of July will be signalised by something like distinct amendment, if it should prove to be the case that there is no further hindrance of the strike order on a large scale.

June has been a month of strikes in Scotland, more than ever before, and this, of course, has been hurtful to our trades in rather a marked manner. The bulk of the strikes, however, have been of merely a local character. The epidemic has not spread further as regards Scottish potteries and glass works, and it is to be hoped that it will pass away without doing so.

THE STOURBRIDGE, BIRMINGHAM AND NORTH OF ENGLAND GLASS TRADES.

(FROM OUR OWN CORRESPONDENT.)

BUSINESS in the Midlands has been fairly brisk in most departments of the flint glass' trade, despite the serious labour unrest that has so long prevailed in several other industries, but there is a fear that a period of slackness may be experienced before the advent of winter. In Stourbridge a few leading firms are able to report that they are busier than at any previous period of the year. Tableware of the highest class, and fancy glass for decorative purposes, including flower-stands, seem to be in most request just now, though the ordinary "bread and cheese" lines constitute by no means an inconsiderable portion of the orders that have come to hand. One great house, noted for the quality of its goods and the excellence of the artistic designs for articles in which fine art workmanship can show itself, is doing an increasing business with leading Continental buyers. The home market is moderately active, and local manufacturers are giving it increased attention. The demand for cut goods has kept up fairly well, also for plain wines and tumblers, but more orders for pressed ware for licensed victuallers and others would be welcomed. The competition of Continental manufacturers appears to be growing. The Board of Trade returns for May show that in the five months period the exports this year exceed those of 1912 by £87,317.

The question of night-boy labour in the glass houses of Stourbridge and Wordsley has excited not a little interest, not only amongst employers but their workpeople. Many meetings have been held, and appeals made to the Home Office, with the result that there will not be that stringency applied to the industry that officialism had demanded. The trade is hampered enough in having to fight foreign rivals, but it would go under if young men have to be substituted for boys and receive, as they would, young men's wages for "carrying off" to the lear or annealing oven. An impartial official investigation into the circumstances will be welcomed by both masters and men. Turning to the glass-cutting trade, we may mention that, on May 31, an inquest was held on a Stourbridge workman alleged to have died from lead-poisoning. He had not been able to follow his employment since November. The moistened putty-powder.

composed as it is of oxides of lead and tin, had got into his system. Dr. Kirkpatrick, who had attended deceased, said he would have contracted the poisoning in the old days, prior to 19 years ago, when the Home Office regulations for the use of fans and other appliances to minimise the risk had come into force. Asked if he had seen a bad case since that time, the doctor said he did not think so. A verdict in accordance with his evidence was returned by the jury. Scores of cutters in the old days were incapacitated by having "dropped hands" through lead-poisoning.

In Birmingham, the glass trade is pretty good on the whole, but the number of houses in operation, as is well known, is not equal to what was the case before the foreigners got such a foothold in our markets. Some manufacturers (we do not say they belong to the city) who have, for a time past, been sending richly cut and engraved suites on approval to dealers, in whose windows they are displayed to advantage, are said to have benefited considerably by the practice, leading, as it has done, to many profitable transactions. Of late, there has been quite a run on ancient glassware by dealers in antiques, and it is perhaps not surprising that some firms, seeing how popular had become the old heavy styles, should seek to reproduce them; but doing so has to a great extent killed the trade in genuine articles. The most recent craze was for curious paper-weights and ink-bottles in which coloured glass in patterns not unlike the broken basaltic columns of the Giant Causeway is introduced. There was an extraordinary demand for these articles, and fancy prices were easily realised. A few dealers, thinking the craze would last some time, laid in pretty large stocks, but it ceased almost at once, and there is, if not some lamentation, a feeling of annoyance on the part of the holders. An ingenious crib-master early entered into the manufacture of these oddities, which he produced to perfection, and experts are puzzled to tell the old from the new. The electro-plate and silver-smiths of the city are keeping their glass-cutters well employed, mostly on articles of foreign origin. Shipping companies have placed good orders for lenses and some makers are well employed in the production of lamps for railway carriages. The cribs are busy in the execution of orders for inks and small medicine bottles. We must not omit to mention the memorial at Soho to the late Alderman Murray, formerly a glass manufacturer of high repute and socially and municipally a man of distinction. It consists of a window in St. Chrysostom's Church, erected by his sister, Mrs. F. Stuart, of Edgbaston, and is a beautiful example of ecclesiastical art. Mrs. Stuart unveiled the window in the presence of a large congregation, prominent among whom were the glass-makers and other artisans from the Vesta Works, with which the late Alderman was connected.

About the glass trade of Warrington during the last two months there is not much of moment to report. Time was when the town was a great centre of the industry, both flint and bottle glass being manufactured, but chiefly from the cause already alluded to in this article, business drooped and works were closed. Another reason for the shrinkage was the dying off of old families interested for generations in the production of glass. At Bank Quay, however, there is activity, well directed, and the reputation of the place fully maintained. In the not distant town of St. Helens the plate-glass trade is fairly good, so far as exports are concerned, but the domestic demand (leaving out of consideration the purchase by motor-car manufacturers) is comparatively small, this condition of things being largely attributable to troubles in the building trades. For sheet-glass there was a lessened demand a month ago. Now, however, there is a recovery, and makers and flatteners are well employed. There is a feeling of unrest amongst the sheet-glass workers, owing, they say, to unfairness in the agreements they have had to sign on the demand of their employers, and redress is about to be sought by an appeal to the Trade Union Congress at its next sitting. Bottle manufacturers are doing a good oversea business, mainly through Liverpool merchants and bottlers, and though the home demand for minerals is not as large as had been expected, it serves to keep the men working full time. Tubing is in steady request, and better prices are obtained than was the case a year ago. The proposal on the part of the Lancashire District of the Glass Bottle Makers' Society to establish a co-operative works last spring does not seem to have matured. Yet it may do so if the employers' combine act with harshness. That, though, is not expected by impartial onlookers, and there is this to be said, that the wages of the men are higher than for some years past. The Society are faced with this difficulty, that to compete against the combined masters they would have to install bottle-blowing machines which can be operated by unskilled labourers, and the Society men are all proficient workers. In Manchester, the few houses engaged in the production of decanters, wines, tumblers, and other tableware are working full time; still, there is no great push. Tubing keeps in good request, and prices show a hardening tendency. Present prospects are certainly encouraging. For machinery glass there is less inquiry, machine-makers having fewer export and other orders. It is, however, expected that there will be a satisfactory recovery by the end of September, if not earlier. The cribs of the city are busily engaged, of course on small work; but the ordinary bottle trade, locally, has been somewhat disorganised. More than three months ago a dispute between a Pendleton firm and their men occurred, a lock-out taking place, as described by one side, the other declaring it was a strike. The proprietors of the works installed a number of bottle-making machines, each, by the aid of a man with a lad to carry off, turning out far more work than was possible under the "chair" system. The strikers, or locked-outs, —call them what you will—were defeated. Some left the district, others got employment as labourers, &c., and one at least returned to the service of the firm. This latter proceeding gave rise to extraordinary scenes, in which wives, sisters, and other relatives of the out-of-works took part, the sequel ending in the Salford Police Court on the 6th ult., a former workman being bound over and ordered to pay the costs for using threats. At the time of writing quietness prevails, and business at the works is proceeding as usual.

In West and South Yorkshire, where the manufacture of bottles gives employment to upwards of 8,000 workers, there is a slight decrease in the output; still, trade is good. Medicals are selling well at Rotherham, and at Hunslet there is activity in the same branch. At Barnsley, where bottles for aerated waters are largely manufactured, as well as other goods, about an average trade is being done, and there is activity at Thornhill Lees, Knottingley, and Castleford. In the latter and one of the other towns (Barnsley) there has been briskness in the carboy department, and it still prevails, caused mainly by the state of the chemical industry, which is certainly active. The workmen here have not come into collision with the combination of masters, and they are contented, on the whole, but a few look with some favour on the scheme, emanating from Lancashire, for founding a workers' glass manufactory. There does not appear much likelihood of the men's union entering into the scheme, or of individual artisans investing their savings in such an undertaking. Some remarkable disclosures were made on

May 21, at Leeds Bankruptcy Court, by a local man. Whilst in his apprenticeship with an ironmonger he began to dabble in bottles, both new and second-hand; the former he imported from Germany, his age being 17 years, and his capital £50. When out of his time he extended his business, and owing to the large quantities of bottles he was importing he had to charter vessels on his own account, and, getting out of his depth, failed. Another case of interest was that of a mineral water manufacturer of Wakefield, charged with selling ginger-beer and lemonade bottles stamped with the names of other firms. He was convicted, and had to pay £13 in fines and costs.

The glass trade in the city of York maintains its position, and its reputation. Excellent specimens of cut, engraved and plain flint glass are turned out, and the production goes steadily forward. For medical bottles there is a good demand, the briskness being, in the opinion of some, owing to the operation of the Insurance Act. Other goods from the same furnace are being manufactured and the outlook for the late autumn and winter season is regarded as satisfactory. Cane and tubing, for scientific and commercial (industrial) purposes, are in fair request, and prices are better than those ruling a year ago. Some amusement has been caused in the city by evidence given in the course of the public examination in bankruptcy of a local glass-blower. He attributed his failure to inability to meet the damages and costs he was ordered to pay at York Assizes in an action for slander. Cross-examined, he said his wife carried on a small money-lending business. There was a club for women, and each paid 2s. weekly for 10 weeks, and received a sovereign, his wife conducting the loan, and charging threepence each. She kept no books, was, in fact, unable to write her own name, yet had a slate in the kitchen; but the marks often got rubbed off. The Official Receiver, amid laughter, said he might describe the wife as "a high-class financier."

At Sunderland the demand for bottles during the past two months had been moderately good. Pressed tumblers and other goods of that class during the same period had fallen out of favour. An early recovery, though, is expected, for the reputation of the works stands high. The manufactory at Seaham Harbour is busy in the production of bottles, of which there is a large range, and the briskness is likely to continue for some time. As regards the glass trade of Newcastle-on-Tyne, there is a varied condition of things. The import in the Tyne of cheap foreign stuff seems to increase, and it certainly has a prejudicial effect on the flint glass manufacture of the city. Wines, clarets, tumblers, jugs, and decanters, &c., of home manufacture, whether cut or plain, are bad to sell at really remunerative prices, and the same is the case with the cheaper pressed work. Short time has had to be resorted to, and how detrimental that is in the glass house it needs no expert to make known. Cutters are slack, with no immediate demand for their full services. On the other hand, the bottle trade, so far as the heavier goods are concerned, is pretty brisk just now, and manufacturers are confidently looking forward to a still greater demand for their wares.

THE CORNISH CHINA CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

AT the last meeting of the St. Austell R.D.C. applications were received from various china clay companies to break a road at Bodelva in connection with the laying down of a pipe track for running liquid clay to Par, and also the closing of a certain road for a short period for the construction of a trench wherein five lines of pipes will be laid. The firms associated were the Hensbarrow China Clay Co., Parkyn & Peters, the New Treverbyn China Clay Co., the Great Hallaza China Clay Co., and the Ruddle Common Clay Co. It was pointed out that as 75,000 tons of clay would go through the pipes, there would be a very great saving of traffic from the roads. It was resolved to grant the application subject to the satisfaction of the Clerk, surveyors, chairman and vice-chairman.

The china clay industry was referred to at a dinner given to non-competitive exhibitors and others in connection with the recent visit of the Bath and West of England Agricultural Society to Truro. Sir Edward Hain presided. Mr. W. Rose, of the firm of North & Rose, who responded to "Cornish Industries," said they had been hindered for years in sending away their clay all the world over, by the lethargy of the Great Western Railway in not affording the facilities they might for the shipping. Fowey was hopelessly behindhand in dealing with the tonnage china clay exporters were desirous of sending away from that port. It was true the Great Western Railway officials at Paddington were waking up, as the representatives at Plymouth had already done, to the fact that they could not put up with the present conditions much longer.

During the month, intimation had been given of some important concessions to the clay workers by three large firms. Meetings have taken place at the Bugle, Carrancarrow, and St. Stephen's works of the West of England and Great Beam China Clay Co., where all the men were apprised by the managing director, Mr. T. M. Stocker, that the company had decided to advance the wages of the men 1s. 6d. per week forthwith. Mr. Stocker informed the men that this rise was the outcome of the meeting he had had with the men some months previously, when he promised them that their petition should receive fullest consideration. Last month he received a similar petition from the men at their Plympton works, and the company decided to advance the wages at all of their works, both to day and piecework men. In addressing the men, Mr. Stocker expressed the hope that the pleasant relations which had so long existed between the company and them would be continued for many years to come. The announcement was received with great satisfaction, and over 1,000 men will be affected by this change. Martin Brothers, who have extensive works at Leemoor, near Plymouth, and also at St. Stephen's and St. Austell, as well as North & Rose, have signified their decision to grant an advance of 1s. 6d. per week to their workmen also.

A section of the Cornish clay workers associated with the Workers' Union, held a conference on June 21 concerning the demand for a minimum wage of 25s. per week. The proceedings were private and lasted three hours. A large meeting was held in the evening when it was announced that the following resolution had been unanimously passed:—"That this conference of clay-workers, the largest and most representative yet held, reaffirms the demand set forth in the general petition presented to the china clay companies. Further, we demand the official recognition of the Workers' Union, as representing the men, in all negotiations and settlements. In view of some of the companies having granted an increase of wages since the receipt of the Union's ultimatum, we recommend that all men not having received an increase should at once tender their notices through the Union to withdraw their labour. We further hereby resolve to support our brothers in dispute materially, and morally, until they have carried their fight to success, and if deemed necessary at a later date, down tools all hands. In case of such general stoppage, there is to be no resumption of work

until the full demands of the petition be granted. Mr. Matt. Giles representing the National Executive of the Workers' Union, said the policy contained in the resolution would be backed by his executive. Out of the twenty-six firms who had received the ultimatum three firms had conceded an advance, whilst another firm recommended a joint conference. There was still some hope, but the present attitude of the companies left them no alternative but to withdraw their men.

The Gazette.

Dissolutions of Partnership.

NOTE.—*When two dates are given in the following announcements the first is the date of the dissolution. The date in parentheses is that of the official advertisement.*

ROBERTS G. W. H. & Co. (Jno. Frdk. Wm. Haworth, Hy. Hartley, and Geo. Wm. Hamnett Roberts), 12, St. Paul's-chambers, St. Paul's-square, Liverpool, dealers in opal glass tiles, &c. May 23, by retiral of G. W. H. Roberts. Debts by Haworth & Hartley. (June 3.)

SLEAFORD BRICK & TILE Co. (Frdk. Ward & Jesse Clare), Burton Pedwardine and Sleaford, brick and tile manufacturers. April 1. Debts by J. Clare, of 4, London-rd., Sleaford. (May 30.)

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

ARVON BRICK AND TILE Co., LTD., Carnarvon.—T. Jones, Brynafon, Segontium-terrace, Carnarvon, retired coal merchant, appointed receiver June 9.

CANDLISH (ROBERT) & SON, LTD.—Resolved May 22, confirmed June 13:—That the company be wound up for the purpose of reconstitution. W. Hyslop, the Bottle Works, Seaham Harbour, secretary of the company, liqr. Meeting of creditors at liqr.'s, July 3 at 11. Claims up to and including June 13 to liqr. forthwith, which, after verification, will be immediately discharged.

CANNINGTON, SHAW & Co., LTD. Resolved May 2, confirmed May 19:—That for the purpose of reconstitution the company be wound up. J. S. Cannington, Exchange-chambers, Liverpool, a director of the company, liqr.

DUNDALK DEMESNE BRICKWORKS, LTD. Claims to S. Smyth, 16, Donegall-square South, Belfast, liqr., by July 14.

HEWITT, MOORE & GODWIN, LTD., Hanley. H. H. Brook (Paterson, Brodie & Co.), Lloyd's Bank-chambers, Burslem, appointed receiver, May 17.

NUTTALL & Co. (ST. HELENS), LTD. Resolved May 15, confirmed June 9:—That for the purpose of reconstitution the company be wound up. F. W. Marsh, Harrington-st., Liverpool, liqr.

PITFOUR BRICK AND TILE Co., LTD. Resolved June 13:—That the company be wound up voluntarily. C. M'Nicoll, Forfar, sol., and another, liqrs. A petition having been presented to the Court of Session by Mrs. H. Adamson or Swan, with consent of husband, for the winding up of the company, a deliverance has been pronounced, dated June 18, allowing answers within eight days after intimation.

PRIMROSE POTTERY Co., LTD., Longton.—S. A. Griffiths, Commerce-st., Longton, appointed receiver June 4.

Order made on Application for Discharge.

LOWIN WILLIAM HENRY, 58, High-st., Cheshunt, Herts, china and glass dealer, &c. This debtor applied at the Court House, Upper Edmonton, on May 30, for his discharge from bankruptcy. It was reported that the receiving order was made on April 3, 1905, on the petition of Jennings & Grenfell, builders, of Enfield, the act of bankruptcy being that the debtor went away with intent to defeat or delay his creditors. The liabilities were estimated at £367, and the assets at £746. The proofs of debt admitted amounted to £376 and the assets realised £183. Nothing was realised in respect of the equity in business premises at 58, High-st., Cheshunt, and two adjoining shops, which he valued at £565. A first and final dividend of just over 4s. in the £ had been paid. The debtor's conduct under the proceedings was unsatisfactory in that on Feb. 13, 1905, he raised a sum of £350 on mortgage on the premises at High-st., Cheshunt, which had been partially rebuilt, and on which he owed £309 to the petitioning creditors, and on March 3 following he left this country for South Africa, taking with him £130 out of £350 and £70 borrowed from his wife. All this money was spent in South Africa, and was therefore lost to the creditors. The debtor returned to England in January, 1912, having to borrow from his daughter the money with which to pay his passage home. On his public examination he said he thought he left sufficient property when he went to South Africa to pay his debts in full, as his freehold property, which was mortgaged in all for £1,434, was valued by the surveyor of the mortgages at £2,000. The Official Receiver submitted that the assets were not equal to 10s. in the £1. on the amount of the unsecured liabilities, that debtor had omitted to keep proper books of account, he had failed to account satisfactorily for his deficiency, that on a previous occasion he made a composition arrangement with his creditors. Mr. Chapman said the stock and other business assets which he left behind realised £183, which was equal to about 10s. in the £ on the total liabilities. The debtor considered that the equity in the business premises was worth £600, and, therefore, he thought that there would be sufficient to pay his creditors. It was not until after he had gone away that the petition was presented. Debtor said he did not intend to trade again. His Honour suspended the discharge for three years.

Notices of Dividends.

GODWIN WM. H., The Ferns, Lugwardine, and AUSTIN F. GODWIN, Goode Reste, Lugwardine, trading as Wm. Godwin & Son, Lugwardine Works, Withington, encaustic tile manufacturers. Second and final, 5s., at 39, Broad-st., Hereford.

GODWIN AUSTIN F. (separate estate), Goode Reste, Lugwardine. Second and final, 10s., at 39, Broad-st., Hereford.

GODWIN WM. H. (separate estate), The Ferns, Lugwardine. First and final, 2s. 6 d., at 39, Broad-st., Hereford.

Notices of Intended Dividends.

FRIEDLANDER MARKS M., 171, New North-rd., Hoxton, late 34, Bath-st., City-rd., London, glass merchant. Claims to E. L. Hough, Bankruptcy Court, O.R.

LEEK THOS. F., the Higher Brick Works, Littlethorpe, Ripon, brick and tile manufacturer. Claims July 5 to H. M. Hardy, Middlesbrough, O.R.

Dividend Payable.

BAYNE JAS., 304, St. Vincent-st., Glasgow, glass merchant, glazier, and plate glass silverer, sole partner of C. & J. Malloch, Glasgow, glass merchants. Third, at P. Rintoul's, 212, West George-st., Glasgow, on July 4.

Appointment of Trustee.

HEMMINGS WM. H., Drayton-st., Wolverhampton, and the Market Hall, Brierley-hill, wholesale china and earthenware merchant. Tr. R. E. Clark, 17, Albion-st., Hanley.

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

** These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—EDS. P.G.)

HEATH THOS., Albion Works, High-st., and 42, Chaplin-rd., Longton, earthenware manufacturer. Dated June 10. Filed June 17. Liabilities unsecured, £3,701. Property, after deducting secured claims, £730. Tr., R. E. Clark, Hanley. Secured creditors, £3,591. The following are creditors :—Greiff & Co., London, £16 ; — Cartlidges, Cobridge, £91 ; Wengers, Ltd., Etruria, £22 ; Ambrosius Knaues & Co., Kirchham, £47 ; T. W. Barlow, Longton, £34 ; A. C. Jones & Co., Longton, £28 ; William Lowe, Longton, £30 ; Mossfield Colliery Co., Longton, £175 ; Mrs. Heath, Longton, £60 ; Mrs. Hammersley, Longton, £21 ; Estate of the late E. J. Heath, Longton, £861 ; Devon and Courtney Co., Ltd., Newton Abbott, £20 ; H. Thorley, Rough Close, £72 ; J. Jones, Stoke-on-Trent, £44 ; Poor Rate, Stoke-on-Trent, £23 ; Stoke and Foley Mills, Stoke-on-Trent, £85 ; Trustees of A. Birk, Stoke-on-Trent, £264 ; C. J. Stubbs, Stoke-on-Trent, £310 ; Rev. A. H. Ashwell, Stoke-on-Trent, £195 ; J. Baskeyfield, Tunstall, £461 ; banker's claim, £724.

MARKS ABRAHAM, trading as J. MARKS, 67, Middlesex-st., Aldgate, and residing at 132, High-st., Kingsland, china, glass, and general merchants. Dated, June 9. Filed, June 16. Liabilities unsecured, £1,042. Property after deducting secured claims, £300. Tr. H. J. de C. Moore, 2, Gresham-buildings, E.C. The following are creditors :—De Grelle, Houdret & Co., London, £87 ; G. Greiner & Co., London, £250 ; Weiss & Biheller, London, £28 ; J. Lang & Co., London, £12 ; C. J. Dams & Co., London, £27 ; Anglo-Foreign Co., London, £73 ; Marxt & Co., London, £37 ; Reynolds & Eason, London, £11 ; Mrs. Marks, London, £30 ; Midland Discount Co., Ltd., London, £50 ; Pountney & Co., Bristol, £19 ; J. Sadler, Burslem, £29 ; Brown & Steventon, Burslem, £41 ; S. Ford & Co., Burslem, £14 ; Rubian Art Pottery, Ltd., Fenton, £11 ; Barker & Kent, Fenton, £37 ; Mann & Poizelius, Germany, £17 ; Victoria Pottery Co., Hanley, £18 ; T. Newall & Co., Lancaster, £72 ; J. Kent, Longton, £24 ; T. Forester & Sons, Ltd., Longton, £32 ; A. Voigt, Sitzendorf, £15 ; Hollinshead & Kirkham, Tunstall, £31.

SMITHSON JAS., 12, Mill-rd., Batley Carr, Dewsbury, china dealer. Dated, May 22. Filed, May 24. Liabilities unsecured, £171. Property after deducting secured claims, £80. Tr. A. Greenwood, Bond-st., Dewsbury. The following are creditors :—Lazarus & Rosenfeld, Ltd., London, £37 ; S. Ford & Co., Ltd., Burslem, £10 ; G. Hobson, Burslem, £11 ; I. Arthurs, Leeds, £12 ; Proctor, Sons & Ratcliffe, Longton, £13 ; J. H. Cope & Sons, Longton, £15.

SWAIN THOS., 67, Nechells Park-rd., Birmingham, china, &c., dealer. Dated, June 9. Filed, June 16. Liabilities unsecured, £768. Property after deducting secured claims, £364. Tr. J. W. Blackham, 180, Corporation-st., Birmingham. The following are creditors :—De Grelle, Houdret & Co., London, £64 ; E. Enderlein, London, £24 ; Max Emmanuel & Co., London, £36 ; C. Quitmann, London, £11 ; Schlenker Klenzle, Black Forest, £20 ; Brown & Steventon, Burslem, £75 ; S. Ford & Co., Burslem, £10 ; F. Heath & Son, Burton-on-Trent, £14 ; E. Stevens, Cradley Heath, £27 ; Leblang Co., Gosselies, £16 ; P. Boschi, Leeds, £13 ; Anchor Porcelain Co., Longton, £26 ; T. Cone, Longton, £134 ; T. Poole, Longton, £16 ; Shaw & Copestake, Longton, £33 ; St. Louise Flint Art Pottery, Ltd., Longton, £16 ; R. Conway, Mansfield, £11 ; Kirkland, & Co., Stoke-on-Trent, £13 ; Felix Bros., Tamise, £17 ; Eveson Bros., Wilnecote, £21 ; C. Osborne, £31.

Private Meetings.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

HEATH THOMAS, Albion Works, High-st., Longton, earthenware manufacturer.—(By Our Own Representative.)—In response to a circular letter issued by Llewellyn & Son, solicitors, Tunstall, a private meeting of creditors herein was called at the Crown and Anchor Hotel on June 20. Mr. J. W. S. Bradshaw, of Hawley and Jackson, solicitors, Longton, representing the Mossfield Colliery Co., Ltd., the largest creditors, was voted to the chair. A statement of affairs was presented to the meeting by Bourner, Bullock & Co., Hanley. Mr. R. E. Clark, of this firm, has been appointed trustee. The history of debtor's transactions was detailed from the time he first entered into business. Commencing as a teapot manufacturer with a capital of £15 at Podmore-st., Burslem, debtor continued to trade there for about five years, afterwards removing to Park Hall, Longton, and eventually to the Albion Works, High-st., which premises he purchased under heavy mortgages for £3,315. He originally had a partner in Mrs. J. W. Beswick, but that partnership was dissolved in 1893. Debtor was the sole executor under the will of his late son, Mr. E. J. Heath, and under the terms of the will he (debtor) was to have the use of the money at 5 per cent. interest to the extent of £1,000, to be used as he thought fit until the children became of age. He had used portion of that money, and an amount of £881 18s. 2d. from his son's estate would be found included in the list of unsecured creditors. The statement of affairs showed liabilities, unsecured creditors £1,730 14s. ; partly secured creditors, £1,763 5s. 6d. ; total, £3,493 19s. 6d. Assets, stock-in-trade, £725 (estimated to produce if sold by auction £517) ; household furniture, £58 5s. ; book debts (estimated to produce), £162 0s. 8d. (good, £135 15s. 8d. ; doubtful, £52 10s. ; bad, £61 0s. 9d.) ; gas deposit, £1 ; clay at wharf, £7 ; gross total assets, £953 5s. 8d. ; less preferential creditors, £17 8s. 10d., net total, £935 16s. 10d. ; total deficiency, £2,558 2s. 8d. ; debtor attributed his insolvency to ill-health during the last four years, blindness, &c., the want of capable managers, the want of capital, and trade strikes. He had drawn on an average £2 10s. a week from the business, and had paid his son's widow a regular weekly payment as interest on the loan from his son's estate. Unfortunately he had never seen the wisdom of having a balance sheet prepared, and nothing had been done in that direction for the last twenty years. With regard to the partly secured creditors, there were three mortgages on the works for £3,379 12s. 11d., against which there was security to the amount of £2,500 on works property, and £113 9s. 8d. surrender value of life policies, leaving £766 3s. 3d. deficiency to rank for dividend ; the second partly secured creditor was Mr. J. Baskeyfield, Tunstall, whose claim was for £611 10s. 2d., and who had securities in life policies, the surrender value of which was estimated at £339 5s. 3d., leaving £272 4s. 11d. deficiency to rank for dividend ; the third partly secured creditor was Lloyd's Bank, Ltd., whose claim for overdraft on debtor's account was £1,555 17s. 4d., and who held life policies, the surrender value of which was £831, leaving a deficiency to rank for dividend of £724 17s. 4d. These three transactions made up the total deficiency for partly secured creditors to rank for dividend, of £1,763 5s. 6d. shown in the statement of affairs. Ald. Goodwin, repre-

senting the Stoke and Foley Mills, submitted that as the debtor was 71 years of age there was apparently no possibility of his carrying on the business any further, and if, as he assumed, it would be necessary to realise, he would like to ask a question with regard to the furniture. So far as his company was concerned, they would be very sorry indeed to touch the debtor's furniture. The case was a very painful one, and he sympathised with Mr. Heath very much. The Chairman observed that he did not think that was a matter which could be dealt with at that particular meeting. They had to consider the serious position of the assets being only £935, as against liabilities of £3,493. If, however, that meeting liked to pass a resolution that the committee of inspection, which would probably be appointed, and the trustee should deal leniently with the debtor in regard to his furniture, it was quite at liberty to do so. He would like to ask the view of Mr. W. H. Breton, who was present as solicitor to the widow of the debtor's son, on this matter. Mr. Breton explained that he had come to the meeting without any locus standi, and was unable to pledge himself in any way. It was a very complicated case, and he was only present out of courtesy. He should refrain from voting on any matter. A creditor asked whether it was perfectly clear that the £881 18s. 2d. which Mr. Breton represented had really been used in connection with the business. The Chairman replied that there was not the slightest doubt about it. He had traced the transactions representing that total through the pass book, and evidently, therefore, the money had been used in connection with the business. Mr. Breton said he had satisfied himself too. The son's widow was left practically penniless. So far as he could ascertain debtor was pressed heavily by the bank at the time the money was paid in, when the overdraft at the bank was considerably more than it was at present. Had it not been for those payments the business would have been wound up much earlier than it was. The Chairman: And as the money was left to Mr. Thos. Heath with power to invest it, it will, therefore, be lost. Mr. Breton: I am not prepared to say. Ald. Goodwin: I take it that Mr. Breton would not be hostile to the suggestion of being lenient with the debtor as regards his furniture, which is only valued at £58 5s., and which, if put up for auction, would probably realise much less? Mr. Breton: I am sorry I cannot say anything. I have no power to pledge myself on the point. On the proposition of Ald. Goodwin, seconded by Mr. J. F. Gilbert, it was agreed to assent to the deed of assignment, and on the proposition of Mr. W. Stevens, seconded by Cafferata & Co., a committee of inspection was appointed, to consist of The Mossfield Colliery Co., Ltd., The Stoke and Foley Mills, Lloyd's Bank, Ltd., Mr. William Lowe, and Mr. John Jones, Stoke. Mr. Barlow, Longton, subsequently proposed, "That this meeting of creditors deal sympathetically with the debtor in his present position, and authorise the committee of inspection to dispose of the furniture to him on such reasonable terms as they think fit." This was immediately seconded by Mr. W. Broomhead, and carried unanimously, the meeting generally expressing much sympathy with the debtor.

Kennedy Miss L., 34, High-st., Holywood, Co. Down, china dealer, &c. A meeting of the creditors herein was held on June 17 in Belfast when the debtor proposed to vest her estate in a trustee for the benefit of the creditors, which was acceptable to the meeting. The following are creditors:—A. & R. Cochran, Glasgow, £8; Edinburgh & Leith Flint Glass Co., Edinburgh, £6; Adderley's, Ltd., Longton, £8; Bishop & Stonier, Hanley, £6; Molineaux, Webb & Co., Ltd., Manchester, £7; Wileman & Co., Longton, £6; John Aynsley & Sons, Longton, £10; Murray, Sons & Co., Ltd., Belfast, £11; Jane Edgar, Ardglass, £98.

Swain Thomas, trading as Swain Bros., 67, Nechells Park-rd., Birmingham, china merchant. (Special Report.) A meeting of the creditors was held on June 9, at the offices of Mr. J. Blackham, 180, Corporation-st., Birmingham. A statement of affairs was presented as at June 2 last, and this disclosed unsecured liabilities of £803 12s. 4d. The assets were estimated to realise £364 13s. 5d., less 12s. for preferential claims, leaving net assets of £364 1s. 3d., or a deficiency of £439 11s. 1d. The assets were as follows:—Stock in trade at cost, £274 18s. 1d., expected to produce, £160 7s. 3d.; fixtures, plant and fittings at cost £10, valued at £2; book debts £577 0s. 1d., estimated to realise £187 0s. 8d.; vans, &c., £6 2s. 6d., and cash at bank, £9 2s. 10d. It was reported that the liabilities were all due to trade creditors. The stock in trade, which was new, had been taken at cost and depreciated by 33 per cent., while the old stock had been written down by 75 per cent. The debtor had been doing a wholesale business with small shopkeepers, and it was feared that any pressure on the book debtors might result in a number of bad debts being made. The debtor commenced business in 1905, with a capital of £100, which he had saved whilst in employment. At the outset he was successful, but after some time he found that there was a shortage in the stock. A fire had also broken out at his premises, which had involved him in a loss of considerably more than £100, as he was not covered by insurance. Latterly the business had not been paying, and he had been pressed by creditors. The present position was attributed to the loss arising from the fire and to the fact that the debtor had been unable to collect his book debts. The opinion was expressed that the debtor had cut prices rather finely as he had been attempting to do a wholesale business at a gross profit of 10 per cent. An offer was made of a composition of 7s. 6d. in the £, payable by three instalments. That offer it was decided to accept. For list of creditors see under "Extracts from the Registry of Deeds of Arrangement."

Bankruptcy Proceedings.

Bridgestock Wm., High-st., March, glass and china dealer. R.O. May 30.

Bridgestock Wm., High-st., March, glass and china dealer. Exam. Law Courts, Peterborough, July 4 at 12. Adj. June 5.

Hemmings Wm. Hy., Drayton-st., Wolverhampton, and the Market Hall, Brierley-hill, wholesale china and earthenware merchant. R.O. May 20. Adj. May 20.

Polack Edwin Julius, 60, Goldhurst-terrace, Hampstead, N.W., manufacturer of porcelain. (Special Report.) The creditors in this case met at the London Bankruptcy Court on May 29 to consider a proposal for a composition which had been lodged by the debtor. Mr. E. S. Grey, Official Receiver, who presided, said that the proposal provided for the payment to all unsecured creditors of a composition of 7s. 6d. in the £, of which 3s. 9d. was to be paid within six weeks of the approval of the arrangement by the Court, and the balance within fourteen days of the first payment. He (the Official Receiver) had made inquiries into the financial position of the two gentlemen who had guaranteed the composition, and in his opinion they were neither of them capable of fulfilling their guarantees. The debtor had written stating that a sum of £5,000 would be forthcoming from the guarantors, of which £2,500 would be paid before the scheme was approved. Continuing, the Official Receiver said that proofs of debt aggregating £32,700 had been received, and after allowing for the security held by the bank that left, roughly, £24,000, on which the composition would have to be paid. Assuming, therefore, that all the proofs were admissible a much larger sum than

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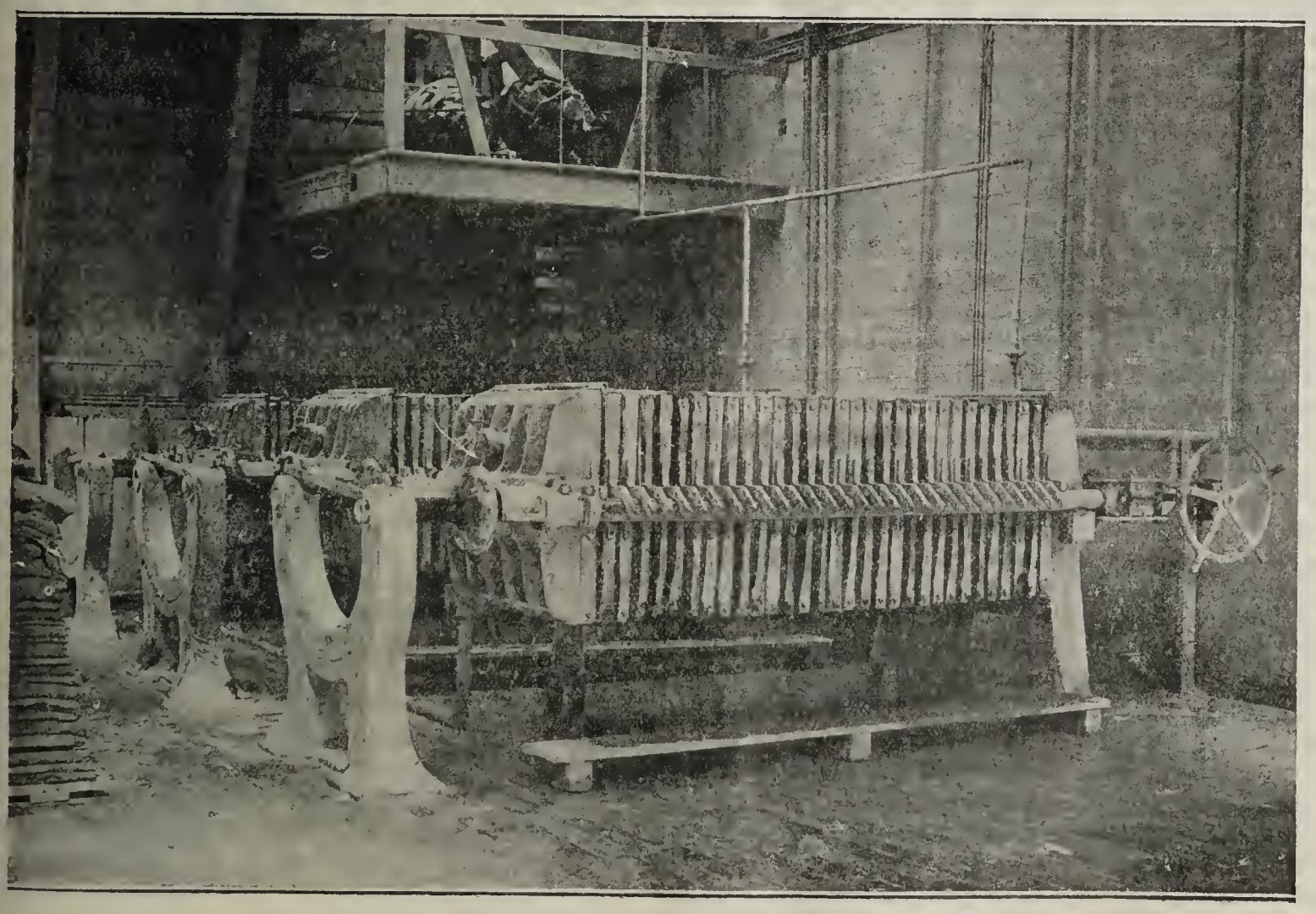
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£5,000 would have to be found by the debtor. Voting letters had been received from nearly all the creditors in favour of the proposal and it would be declared carried. The next step would be to apply for the approval of the Court, and, although it was inconceivable that the proposal in its present form would be sanctioned, a period of nearly two months would probably elapse before the matter came before the Court. In the meantime, there being no adjudication in bankruptcy, the Official Receiver could not take possession of the assets, as trustee, because there was an adverse claim to them. The proposal was then formally declared carried, and the meeting closed. The public examination of the debtor was held at the London Bankruptcy Court on the following day, before Mr. Registrar Brougham. The debtor, in his statement of affairs, estimated his liabilities at £29,479 18s. 3d., of which he expected £11,581 16s. 9d. to rank for dividend, and valued his assets at £1,501 16s. 6d. Examined by Mr. J. B. Knight, Assistant Official Receiver, the debtor stated that he was of Hebrew nationality, and before 1893 was employed in the pottery trade. He afterwards carried on business as a shipper in South Africa, and since his return to this country in 1900 had been partly occupied in experimenting in processes for "toughening" porcelain ware. In March, 1909, he entered into a contract to purchase the Swan Tile Works, Binns-rd., Liverpool, for £3,500, which was payable to the receiver for the debenture holders of a previous concern. He obtained the £3,500 by arranging an overdraft with his bankers, and spent £12,000 on improvements to the works, this sum being also provided by his bankers and guaranteed by two other persons. In 1910 he was ready to start business as a porcelain manufacturer, but practically no business had in fact been done. In October, 1910, he turned the business into a private limited company, having a nominal capital of £25,000. He as vendor was to receive the whole of the shares, and the company was to discharge his liabilities, but he never received the shares. In April, 1911, he converted the concern into a public company for the purpose of raising capital. The company subsequently passed a resolution to issue a number of participating preference shares, which were allotted to him in trust for the company. He then entered into a contract on behalf of the company for the sale of these shares to a bank in Paris, but the scheme was not carried through, and at the date of the receiving order proceedings against the bank were pending in France in relation to the matter. The company obtained contracts in its business of porcelain manufacturer, but was unable to carry them through owing to lack of capital. No portion of the purchase price for the business had been paid to him by the company, and at the date of the receiving order he, personally, had possession of the business premises. The Official Receiver: I believe that the greater portion of your debts have been contracted either in connection with the company or for living expenses? The debtor: That is so. I don't think I lived in excess of £500 a year. In further examination the debtor said that he owed his wife between £6,000 and £7,000, but he had not returned her as a creditor in his statement of affairs. His failure was immediately due to the calling in by the bank of their loan. He contended that he should have been able to meet the loan but for the attitude taken up by the bank. He agreed that many bankruptcy petitions had been presented against him in recent years, but asserted that several of them were filed during his absence on the Continent. The Official Receiver: I put it to you that at no time in the last five years could you have paid your debts in full? Oh, yes, I could. In reply to further questions the debtor said that, speaking generally, he did not pay his creditors because it was not convenient. Examined in regard to the proposal for a composition which he had laid before his creditors, he asserted that the necessary money was being found, primarily, by three persons who were not mentioned as guarantors. He assured the Official Receiver that the money would be forthcoming. The examination was ordered to be concluded.

Walton Jim, 32, Hill-st., Swadlincote, journeyman potter. R.O. May 26. Adj. May 26. Exam. C.C. Burton-on-Trent, July 7 at 11 30. The first meeting of creditors was held on June 9, at Derby. Debtor blamed his wife for his bankruptcy The whole of his indebtedness of £73 2s. 7d. was, he said, incurred by her prior to December, 1910, without his knowledge. She obtained goods on credit from travellers and others, and pledged them. After she had left him he found a quantity of pawn tickets, those for clothing alone representing a sum of about £14. Debtor's assets were placed at £12 10s., leaving a deficiency of £60 12s. 7d. The Official Receiver will administer the estate.

Wilshaw Harry, 35, Alcester-st., Redditch, china, &c., dealer. R.O., June 16. First meeting, 191, Corporation-st., Birmingham, July 2 at 11.30. Exam., C.C., Birmingham, July 17 at 2.30. Adj., June 16.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

Air-Tight Cover for Jars, &c., No. 12,631.—J. Pascall, Ltd., and S. W. Pascall. Air-tight cover for jars and bottles by metal cock disc stretchers. May 30, 1913.

Automatic Glass Bevelling Machine, No. 12,861.—F. Shephard and M. Shepherd. Automatic glass bevelling machine. June 4, 1913.

Cream Mug, No. 12,401.—C. Waight. Cream mug. May 28, 1913.

Earthenware &c., Rollers, No. 11,162.—J. Lomax. Cement or earthenware rollers for use in the textile industries. May 13, 1913.

Fire Bricks or Blocks, No. 13,072.—S. W. Burley. Manufacture of fire bricks or blocks. June 5, 1913.

Manufacture of Saggers, &c., No. 11,804.—C. Taylor. Manufacture of saggers and like receptacles employed for containing articles of pottery and the like during their process of firing. May 21, 1913.

Treating Potters' Glaze, &c., No. 12,284.—F. Beardmore, T. H. Gaskell and W. Boulton, Ltd. Apparatus for treating potters' glaze slip, powdered substances and the like. May 27, 1913.

Specifications Published.

1912.

11,374.—Sayer. Stands for displaying ewers and basins and for other china ware, earthenware, glass, and other goods.

12,401.—Brownlow. Machine for the manufacture of jam jars, filters, saggers, hot-water bottles, and like articles.

15,083.—Heap. Tiles for roofing.

22,659.—Bolton. Shaping of pottery.

23,577.—Podszuz. Moulding and casting of ceramic or fireproof material.

11,771.—Podszuz. Manufacture of ceramic or fireproof material.

14,235. Schwerin. Manufacture of articles of ceramic refractory material.

14,520.—Dall. Porcelain gum blocks for dentists' use.

1913.

288.—Sykes & Sugden, Ltd., and Smith. Machines for making glass bottles, jars and like hollow ware.

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6,680.—Gobbe. Means for cooling glass melting and like furnaces.
3,118.—Podszuz. Manufacture of ceramic or fireproof material.

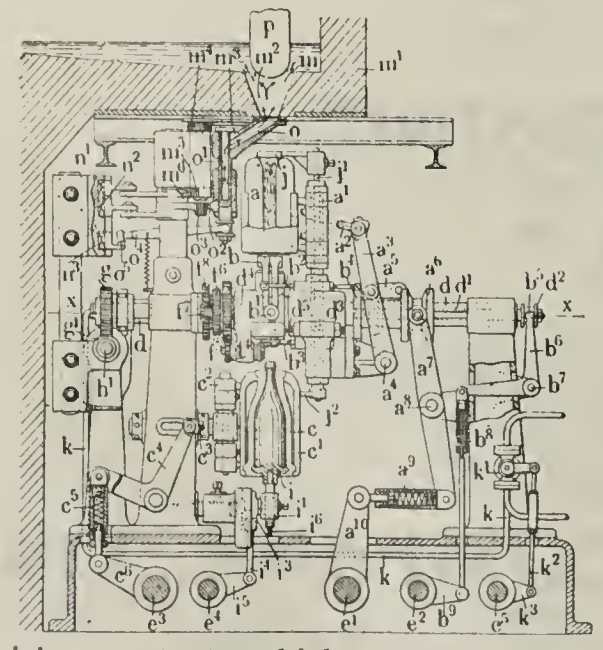
Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

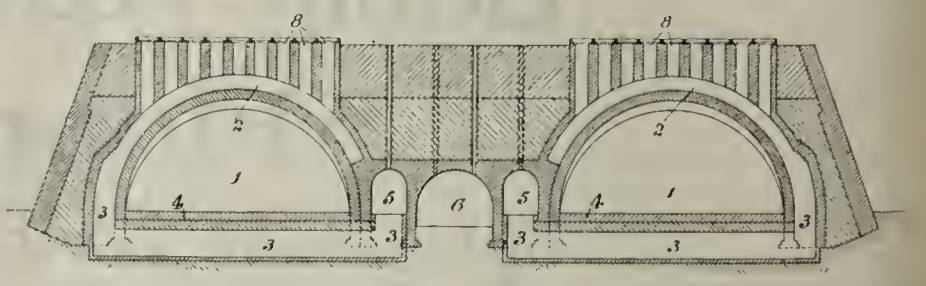
615,688.—A. G. Der Gerresheimer Glashuttenwerke vorm. Fred. Heije, Düsseldorf-Gerresheim. Address for service c/o Hubers & Mond, 19, Southampton-buildings, Chancery-lane, W.C.
616,104.—Mrs. E. Hall, The Hollies, Coombe-lane, Cottenham Park, Wimbledon, S.W.
617,344.—C. S. Abraham, c o Dr. Abraham, 66, Harley-st., W.
618,237.—Burroughs, Wellcome & Co., Snow-hill Buildings, E.C.
618,403.—Doulton & Co., Ltd., Lambeth, S.E.
618,690-92.—The New Chelsea Porcelain Co., Bagnall-st., Longton.
617,572-76.—W. H. Goss, Falcon Pottery, Stoke-on-Trent.
618,059.—Mrs. B. E. M. Boekbinder, 87, Burton-rd., S.W.
618,489.—Grimwades, Ltd., Stoke-on-Trent.
618,563.—W. A. Bailey, 148, Audrey House, Ely-place, E.C.
618,588.—F. Tuhten, Wolfe-st., Stoke-on-Trent.
618,735.—H. O. Turner, 42, Ingleby-st., Birmingham.
618,801.—F. C. Kelly, 53, Kingsland-rd., N.E.
615,031.—Idris & Co., Ltd., 120, Pratt-st., N.W.
617,652.—Doulton & Co., Ltd., Lambeth, S.E.
618,291.—J. Dowell & Sons, Ltd., Globe Works, Chatsworth-rd., N.E.
618,404.—Star China Co., Atlas Works, Longton.
618,412.—Boling Brown & Co., 3 and 4, Aldersgate-buildings, E.C.
618,562.—The British Perfume Co., Poole.
618,730.—Pountney & Co., Ltd., Fishponds, near Bristol.
618,840.—Doulton & Co., Ltd., Burslem.
618,949-50.—W. H. Goss, Stoke-on-Trent.
619,010.—Fletcher Russell & Co., Ltd., Palatine Works, Warrington.
619,055.—M. Emanuel & Co., 41-2, Shoe-lane, E.C.
619,050.—J. A. Robinson & Sons, Ltd., Wolfe-st., Stoke-on-Trent.
619,106.—F. B. Rodgers, The Aldwych Club, Aldwych, W.C.
619,108.—Price Bros., 12, Felix-gardens, Brixton-hill, S.W.
619,149.—Grimwades, Ltd., Stoke-on-Trent.

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Automatic Manufacture of Glass Articles.—A. Wilzin, of 100, Boulevard Victor Hugo, Saint-Ouen (Seine), France, claims :—(1) An automatic kinematically actuated machine for manufacturing glass objects, characterised by the fact that the stoppage periods of the moulds and mould carriers during which the glass working operations (such as gathering, blowing, cooling, and so forth) take place, can be varied at will by means of a controlling device, which also permits of displacing certain of the mechanical movements relatively to others in the cycle of the manufacture and comprising contacts which act upon clutches capable of establishing and interrupting connection between the source of energy and the mechanism which communicate the desired movements to the moulds. (2) A machine for manufacturing glass articles provided with a control device as set forth in Claim 1, characterised by the fact that the contacts (dogs, pins, shoes, stops) of the latter are adjustable, thereby permitting of varying at will the commencement, termination and duration of the stoppage periods of the moulds during the cycle of manufacture. (3) A machine for manufacturing glass articles provided with a control device as set forth in Claims 1 and 2; characterised by the fact that this device with its control contacts is actuated with a continuous rotary movement. (4) A machine for manufacturing glass articles as set forth in Claims 1, 2 and **3**, characterised by the fact that the movements of the moulds are controlled by a rotary member possessing a number of cams and adapted to be stopped and restarted in its rotation under the influence of the contacts of the control device. (5) A machine for manufacturing glass articles as claimed in Claims 1 to 4, characterised by the fact that the stoppages and restartings of the rotary cam element are produced at the proper moments by the action of the contacts of the control device upon an instantaneous clutch with automatic release. (6) A machine for manufacturing glass articles as set forth in Claims 1 to 5, characterised by the fact that the control device comprises supplementary contacts which during the cycle of the manufacture produce the startings and stoppings of the movements which control the gathering or the shearing of the glass. (7) A machine for manufacturing glass articles as set forth in Claims 1 to 6, characterised by the fact that the periods of stoppage and restarting of the mechanisms which produce the pouring (the gathering) of the glass or its shearing are produced by appropriate contacts on the control device acting by the intermediary of instantaneous clutches upon rotary cam elements distinct from the element which actuates the moulds. (8) A constructional form of the machine set forth in Claims 1 to 7, characterised by the fact that the control device carries contacts producing the movements and stoppages of an obturator which closes and uncovers a tap hole in the furnace formed above the parison mould in its filling position. (9) The application of the control device set forth in Claims 1 to 3 to an installation comprising a series of machines for manufacturing glass articles connected one with the other, and which receive their several movements from an auxiliary motor mechanism in which the transmission and control members are grouped.



Kilns for Firing Bricks, Tiles, &c.—G. Andina, of Trofarello, Italy, and J. W. Bottomley, of Whitehouse Engineering Works, Leeds, claim :—(1) In a continuous kiln the providing of a continuous air space or cavity extending over the whole of the chambers in the kiln to form a sealed hot air space and having controlled communication with the respective chambers, with the atmosphere, and



with a main air flue or flues. (2) The combination with a single chamber kiln having an air space or cavity extending completely over the surface of the chamber to form a sealed hot air space and having controlled communication with the chamber, with the atmosphere, and with the corresponding air space or cavity of another or of other kilns, of concentric baffles or walls 9.

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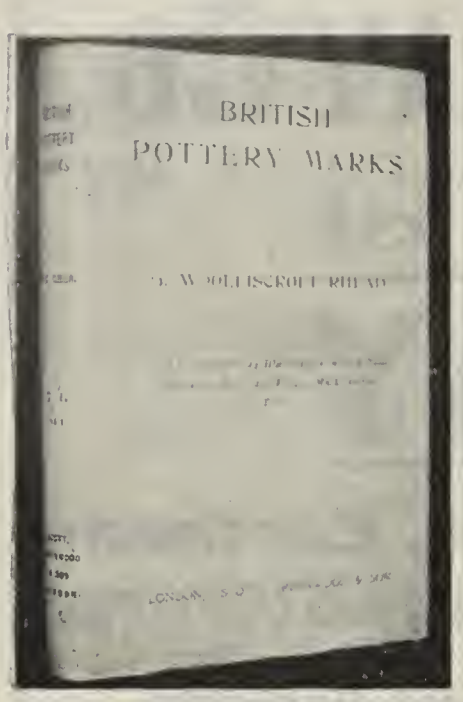
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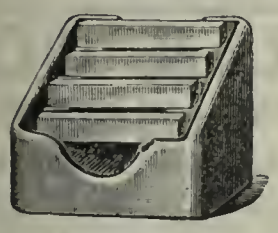
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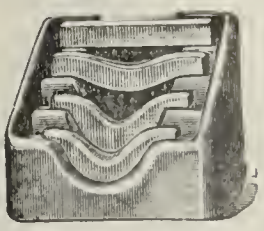
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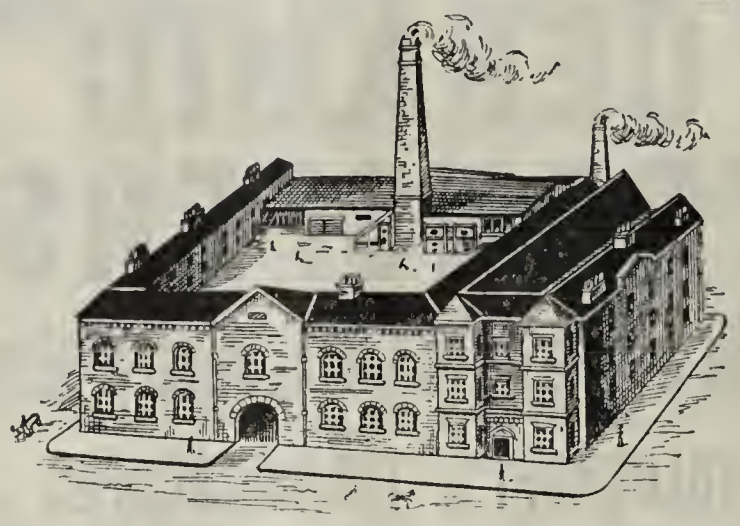
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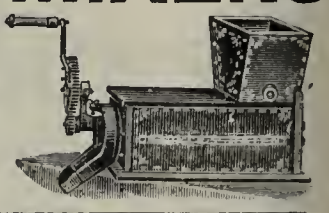


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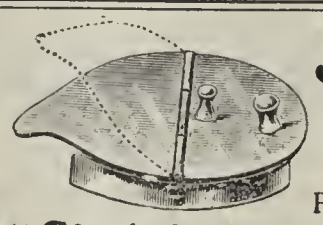
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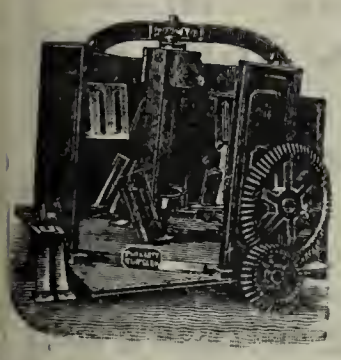
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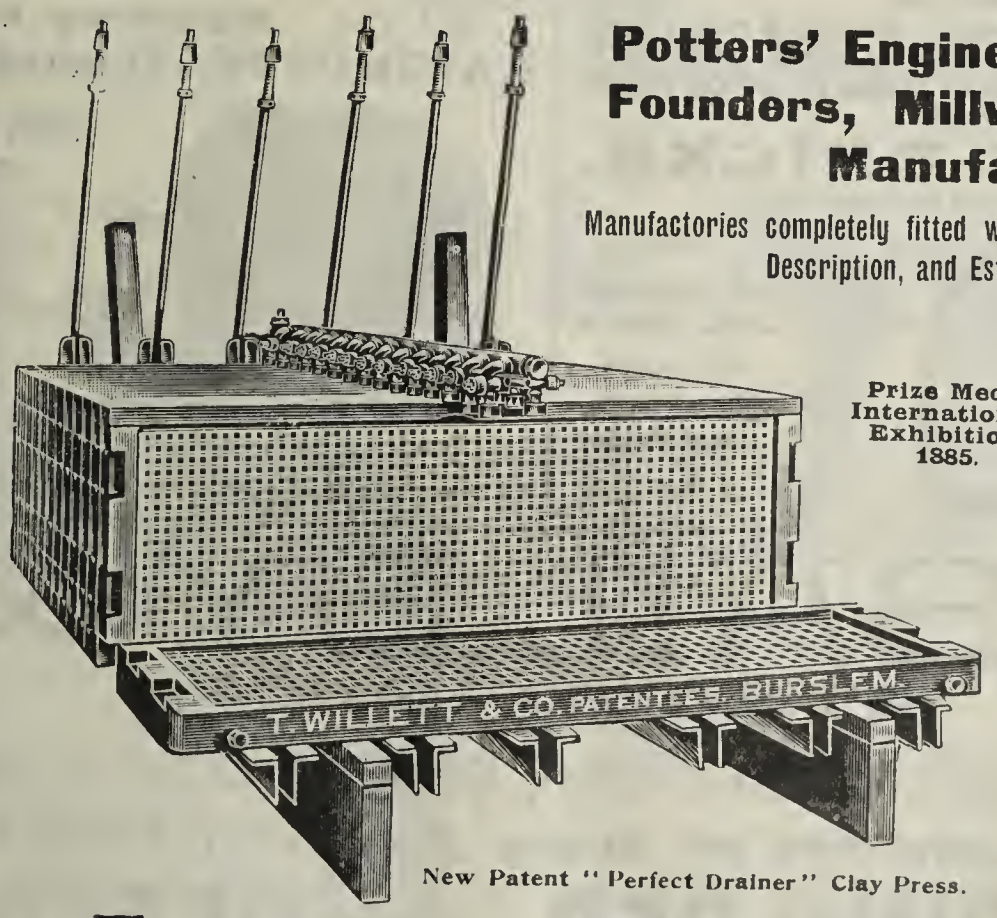
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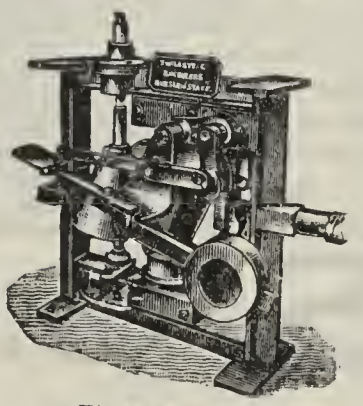


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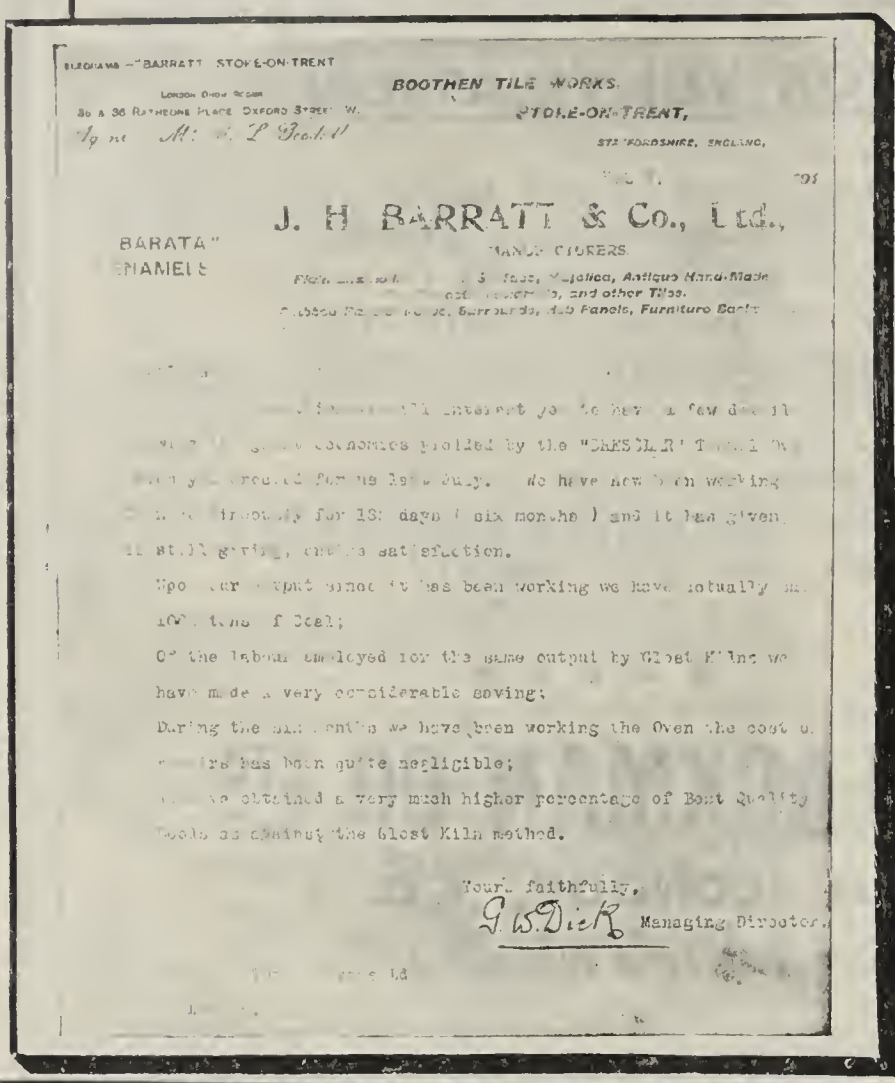
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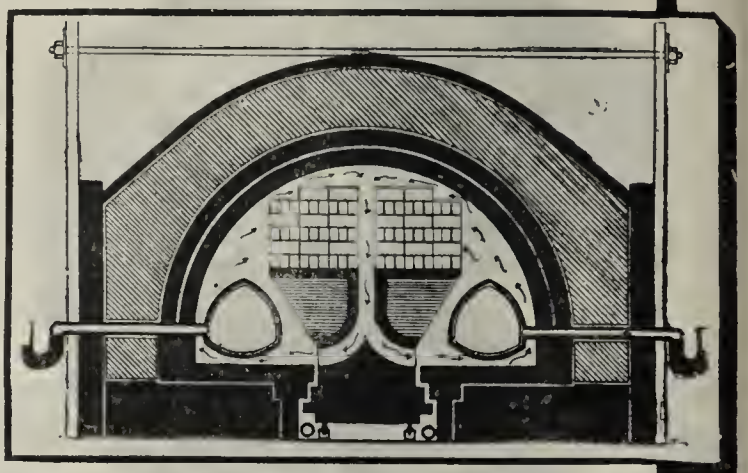
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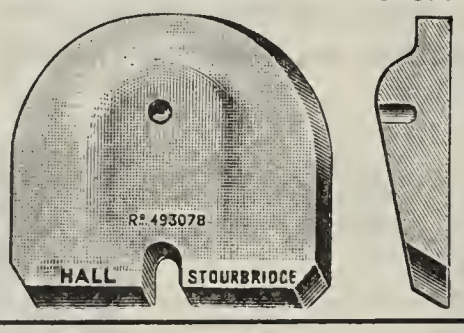
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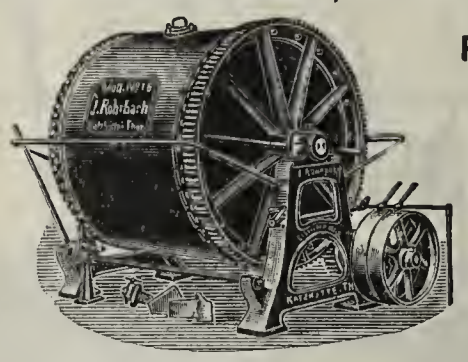


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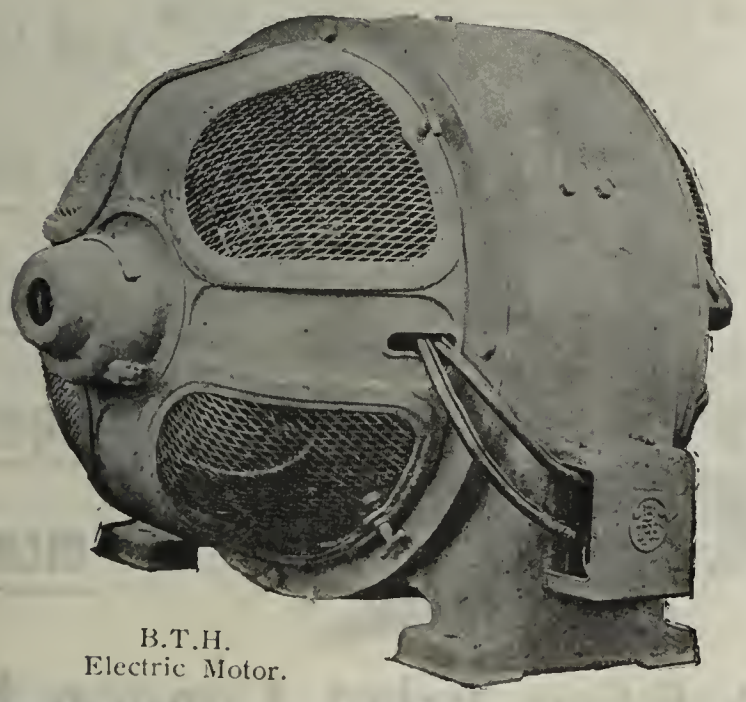
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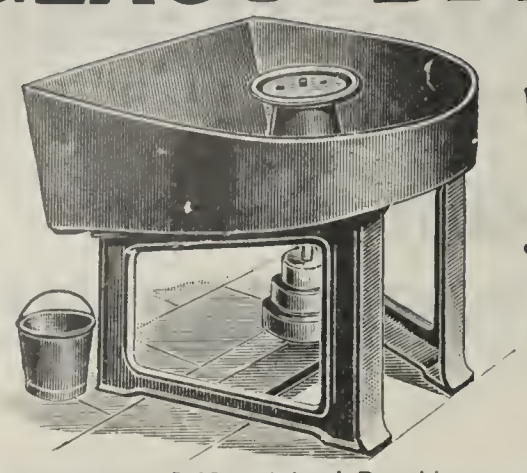
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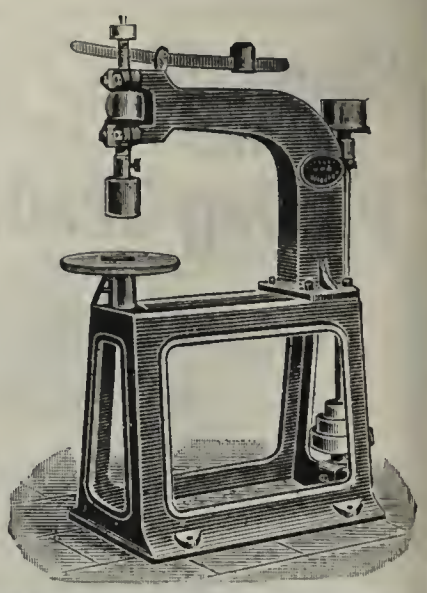
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We beg to say that the Magnetic Separators you installed in our bottom works have now been working for some considerable time, and up to the moment of writing to you they are perfectly satisfactory.

Stoke-on-Trent, June 5th, 1912.

It is with great pleasure that we testify to the excellence of your Magnetic Separators. As you are aware, we have had them in use for some years, and they continue to give the best results. We shall be glad, as in the past, to allow prospective purchasers to see our installation if you so require.

Tunstall, June 3rd, 1912.

In reply to your inquiry of the 1st inst., we are pleased to say that your Magnetic Separators have given us complete satisfaction from the time we fixed them, nearly 4 years ago. Our experience proves them to be the best Separator on the market, the minute particles of Iron that will pass are quite negligible for even the most delicate Pottery Ware.

Stoke-on-Trent, June 6th, 1912.

Your letter of the 4th inst. The Magnetic Separators you put in for us are working quite satisfactorily and answering the purpose for which we installed them. You may make what use you like of the above remarks, but we are afraid we cannot agree to show our plant to your intending customers.

Fenton, Stoke-on-Trent, June 6th, 1912.

Replying to your letter of the 4th inst., we are pleased to state that the Magnetic Separator you supplied us with about 2 years ago has been in constant work daily, and has done its work very well. It is our intention at an early date to augment the plant, when we propose ordering another machine from you.

M S

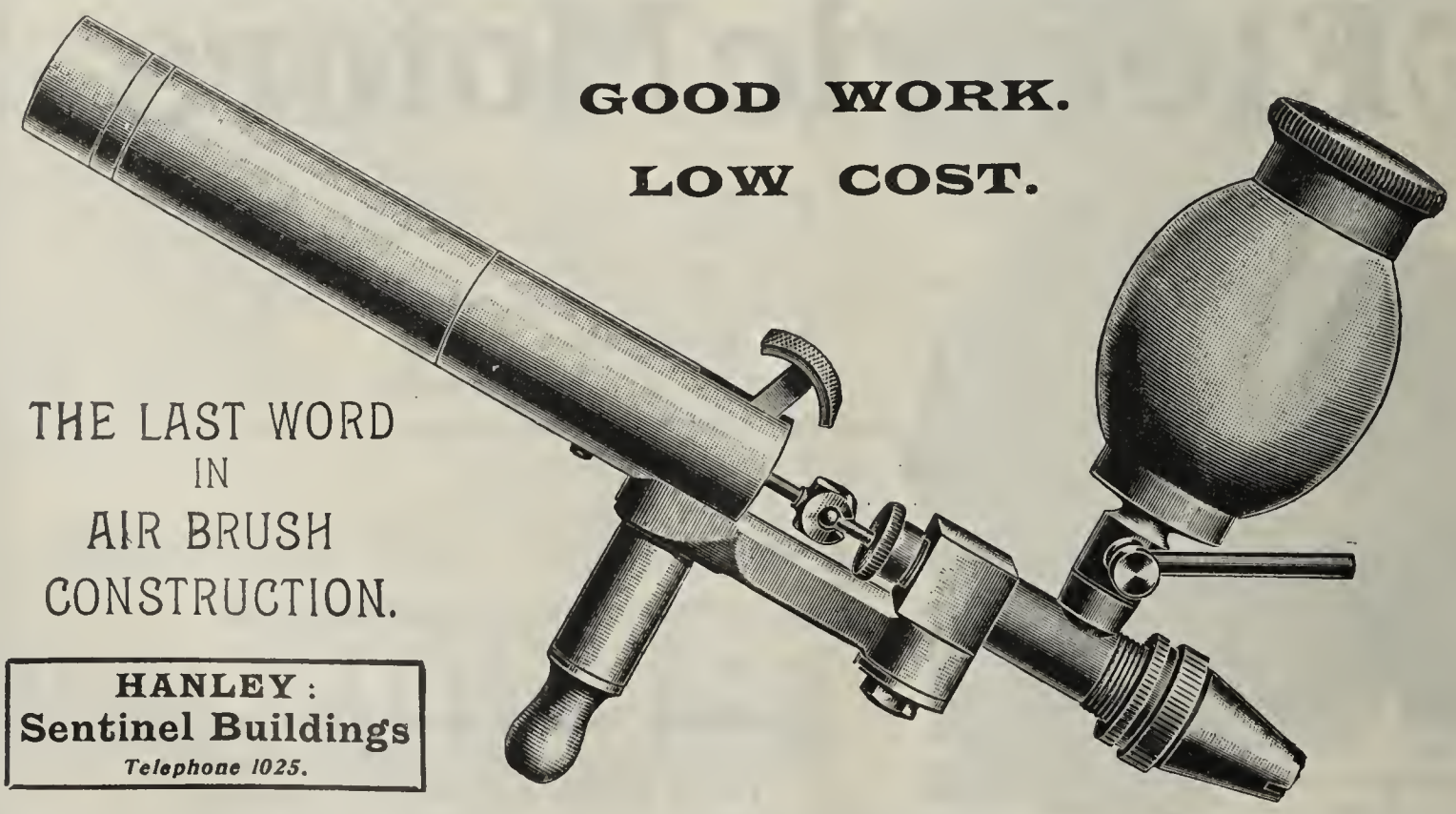
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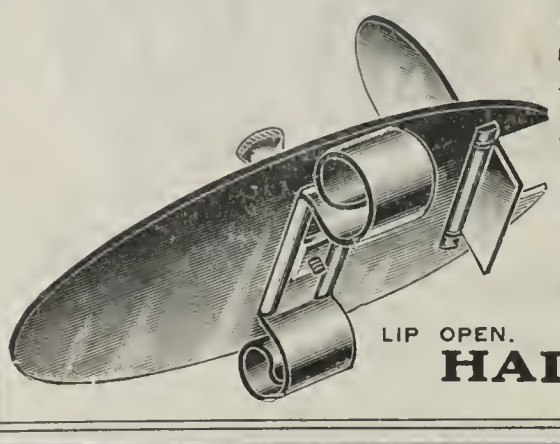
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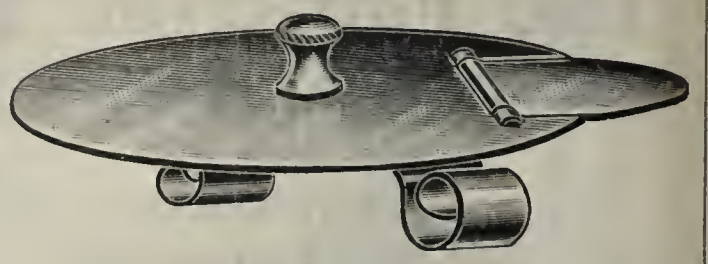
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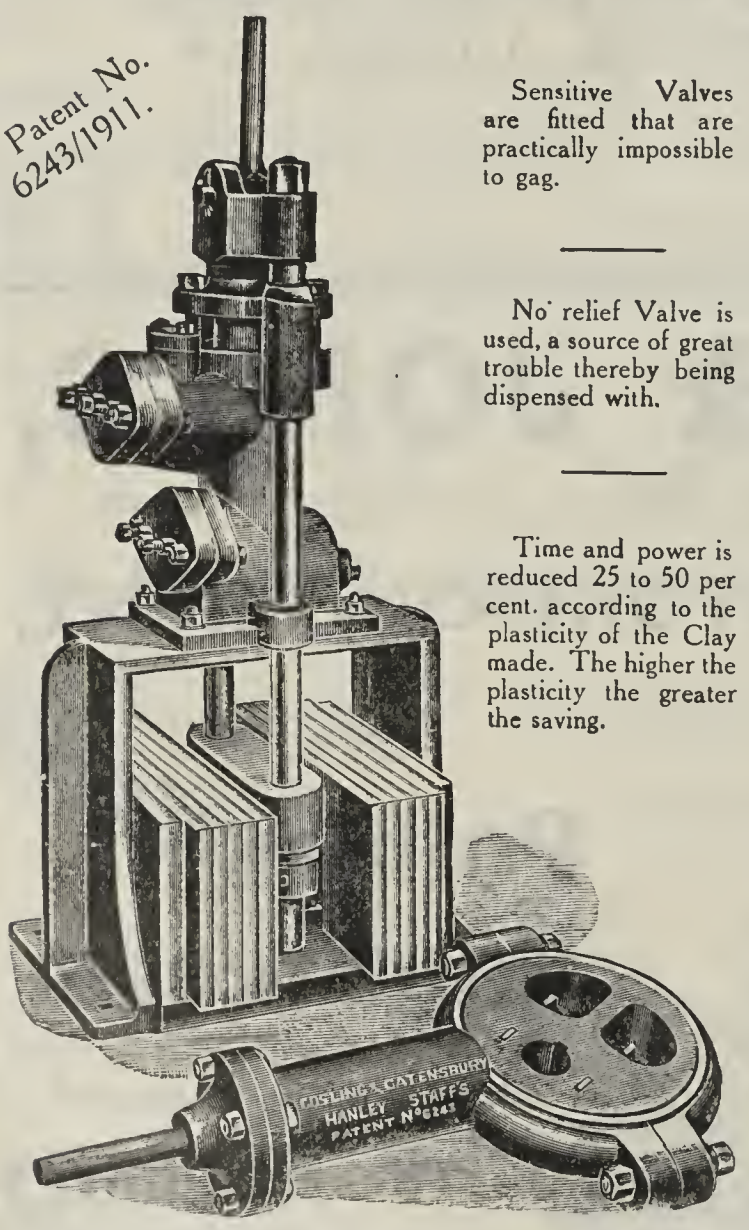
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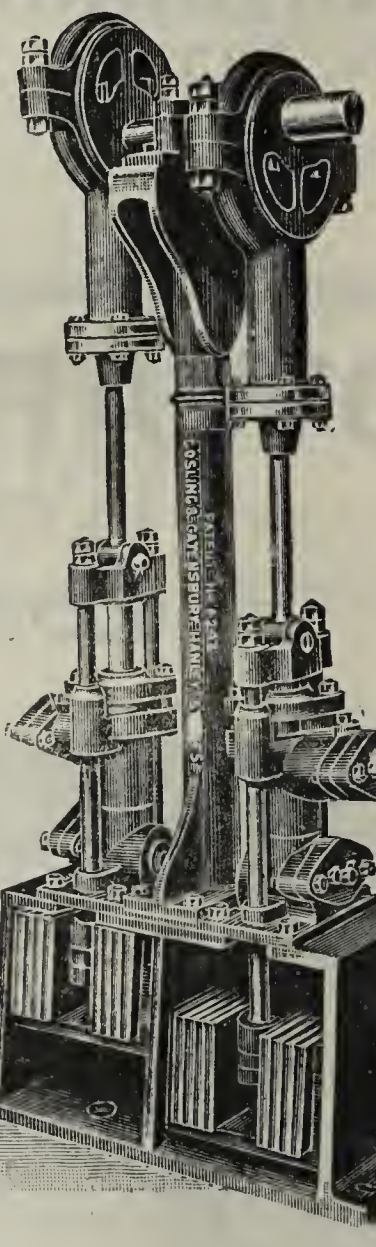
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☞ FOR LITERARY CONTENTS SEE PAGE 887. INDEX TO ADVERTISERS, PAGES 866 and 868.
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All announcements for this Heading for September issue must reach us by first post on August 27th.

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(CONTINUED ON PAGE 856.)

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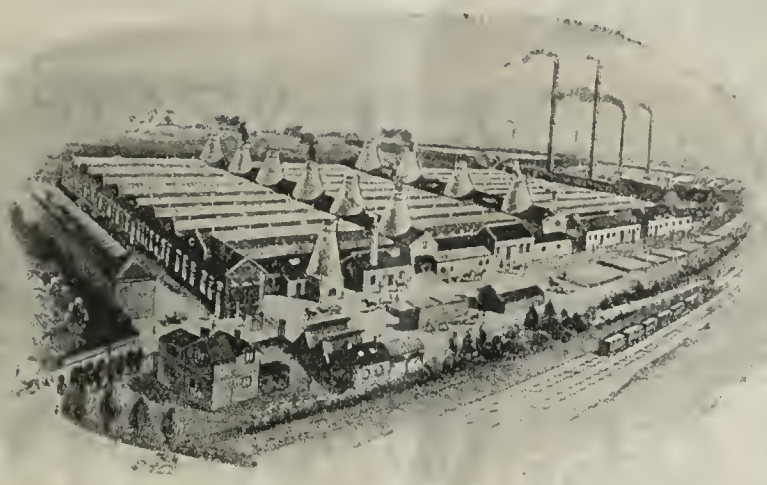
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Cristalleries de Baccarat, *Glassware*, Paris . . .	**E. St. Clair,** 48, Hatton Garden. E.C.
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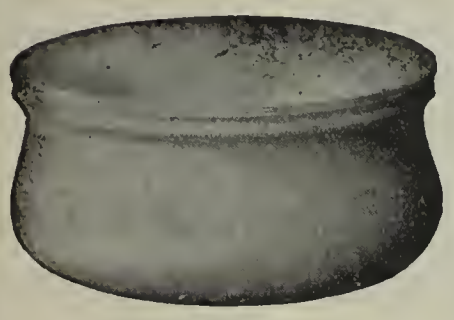
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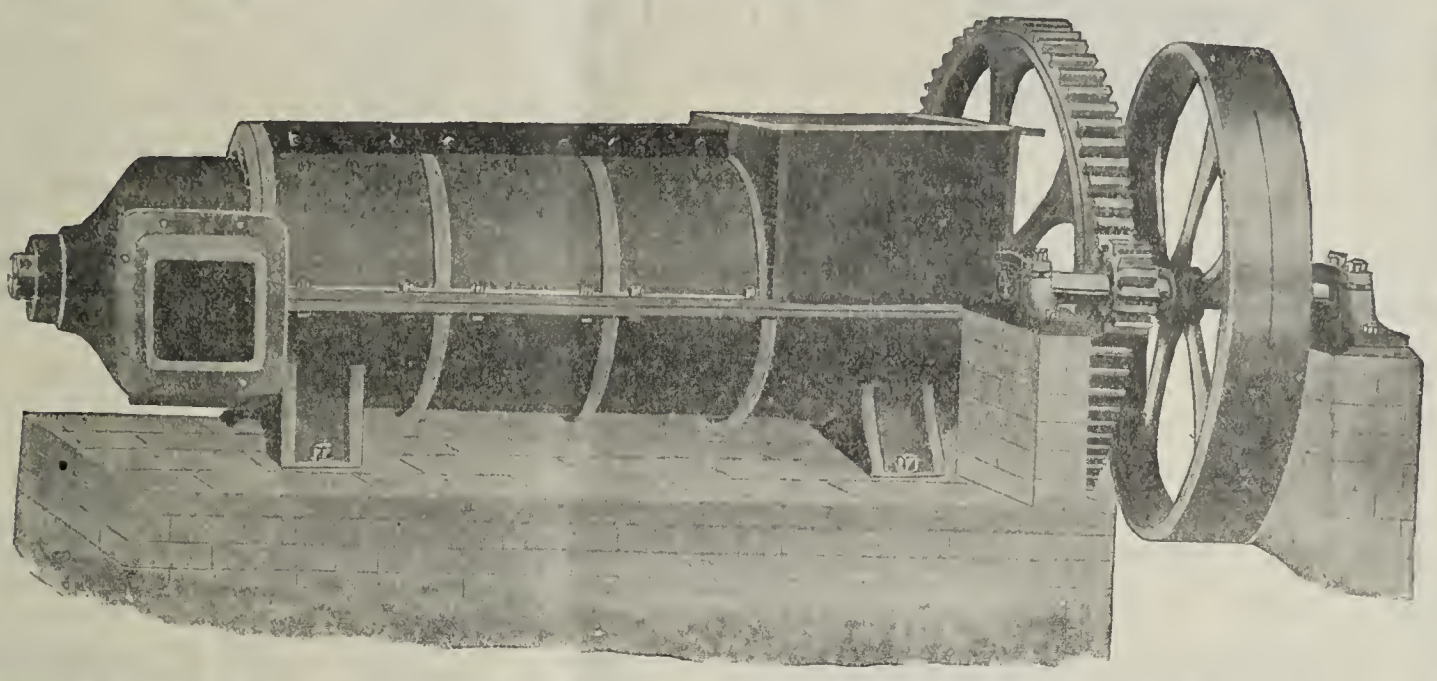
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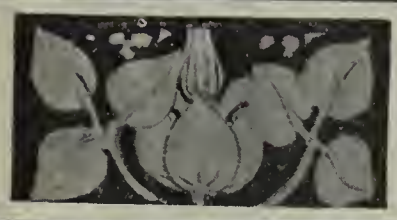
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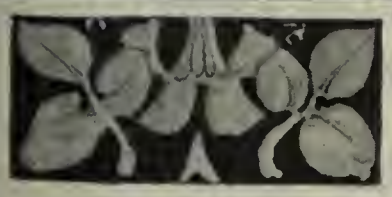
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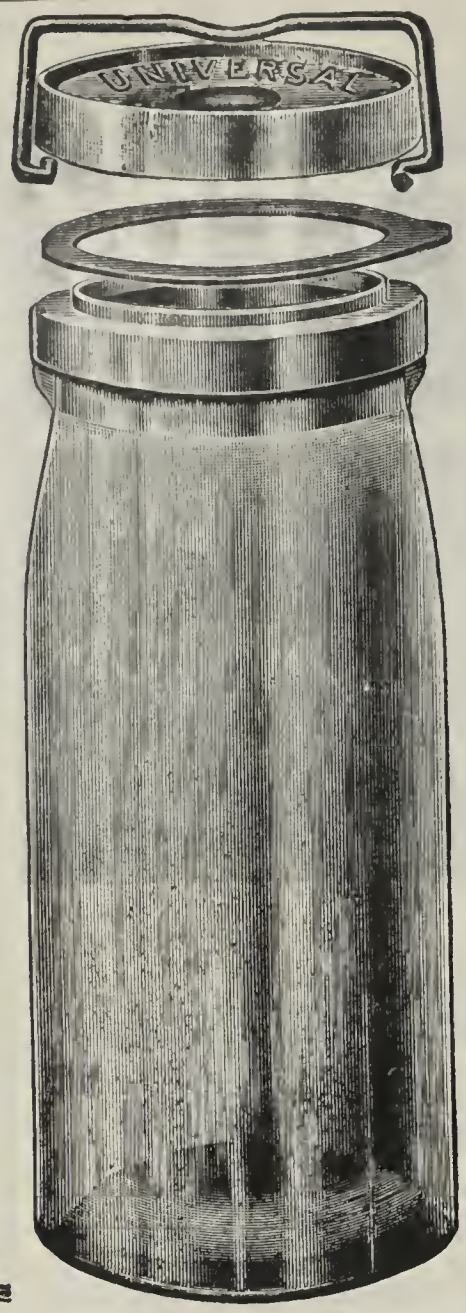
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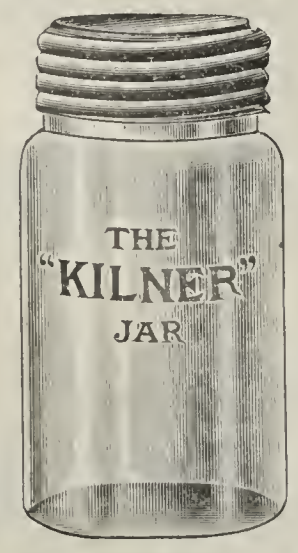
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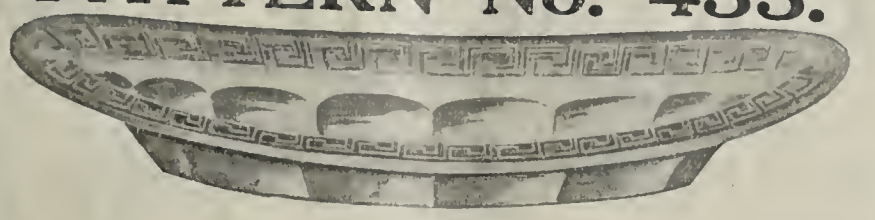
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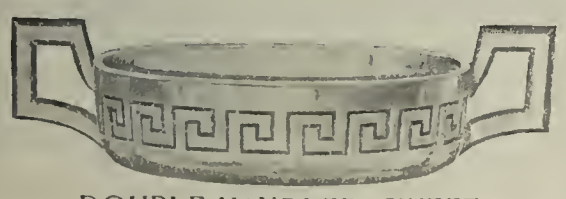
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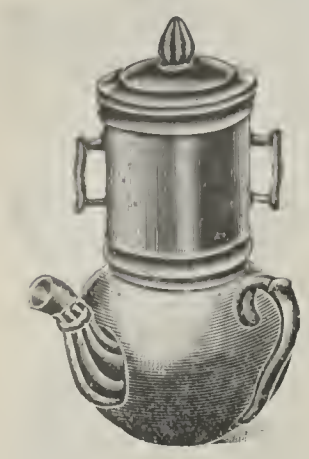
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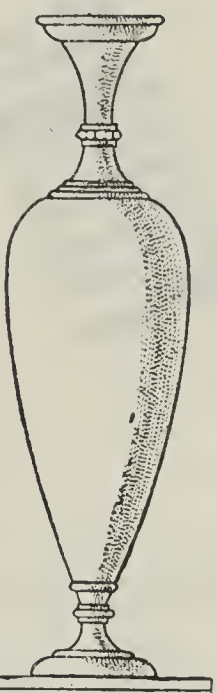
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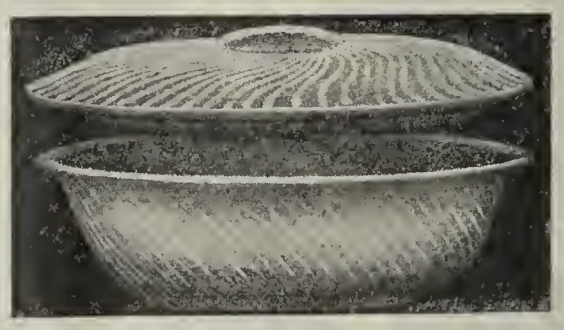
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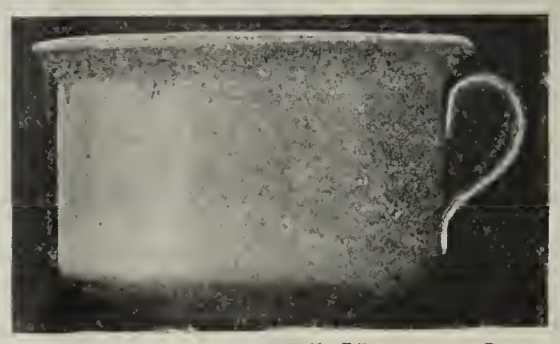
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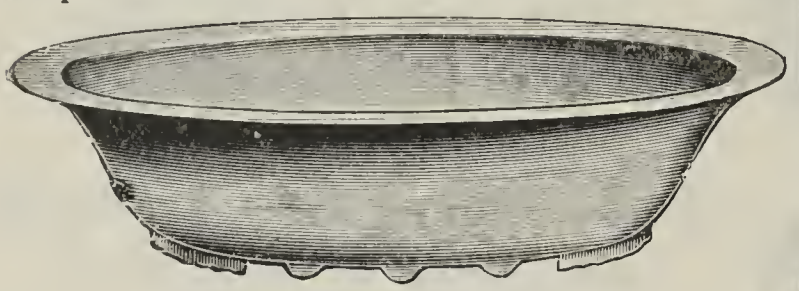
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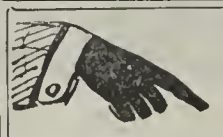
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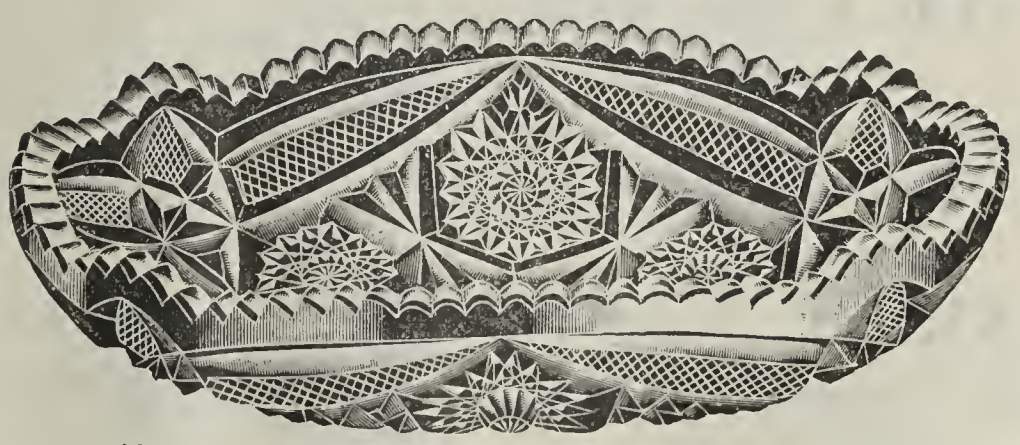


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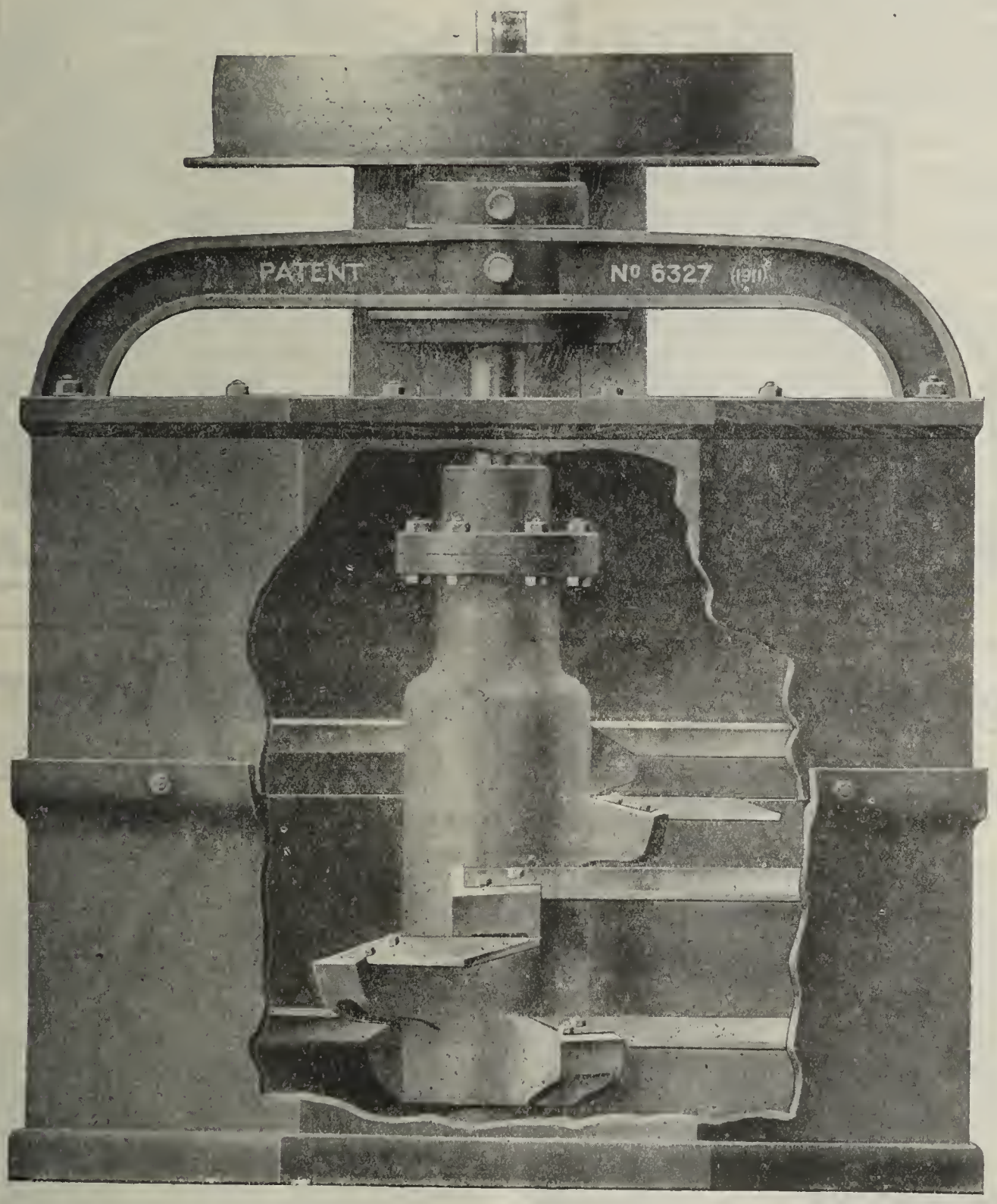
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Editorial Notes.

REPRODUCTIONS.

ON several occasions in recent issues we have had to refer to the numerous reproductions of early patterns which are now being turned out by our pottery manufacturers. As was remarked in our last number "reproductions are the spirit of the age," and this fact has led some persons to criticise our manufacturers for their lack of originality. It may, however, very plausibly be urged that the business of the industrial potter is only to follow the public taste and, as the public of the present day have no claim to artistic originality themselves, but, apparently, realising that they are the heirs of the artistic ages, prefer to range at will among the masterpieces of past achievements, surely the most that can be expected of the modern manufacturer is that he should endeavour to guide their choice in reasonable paths.

The master potter, if put upon his defence, may carry the argument farther still and contend that, as we are assured on the best authority "there is no new thing under the sun," so it is hopeless for him to attempt to originate. And he may ask whether good reproduction is not better than bad originality; an argument which gains in force from a contemplation of the eccentricities of the Art Nouveau, the Cubists and the Futurists. Indeed, the greatest artistic movements which the modern world can show, the Renaissance and the Gothic Revival, as their very titles indicate, were simply based on reproductions respectively of classic and mediæval styles.

Surely it is pardonable and even praiseworthy for a manufacturer to revive the historic and beautiful styles produced by his own works at an earlier phase of its existence, or even those of other works which for one reason or another are now no longer carried on. Many of our greatest modern potters have not been ashamed to seek inspiration, literally "from China to Peru," and their action has been abundantly justified by the results.

The only reproduction which we consider to be quite unjustifiable is the copying of the wares of another manufacturer as soon as he, perhaps by long and costly experimental work, has hit upon something which suits the public taste. The pioneer is all too often discouraged and deprived of his profit by the simian imitativeness of unscrupulous competitors. This sort of brain-picking seems to us at least as reprehensible as pocket-picking and merits the most severe condemnation.

POTTERY EXPORTS AND IMPORTS.

THE export trade in June, which totalled up to £294,429, was practically the same as in the preceding month, but was substantially better than in June of 1912 (£253,160), and June of £1911 (£248,446). The Canadian business was still on the upgrade, and amounted to £47,414, which was nearly £5,000 better than in the same month of last year. The United States shipments fell from £38,711 in May to £32,123 in June, and this figure was nearly £3,000 below that of June of last year. The South American trade was on a lower scale than in the preceding month, but better than in the corresponding month of last year. Business with the Antipodes was considerably better, the Australian shipments being of the value of £28,339,

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as against £25,638 in the previous month and £20,442 in the corresponding month of last year. The New Zealand trade amounted to £9,497, or nearly £1,500 more than in May last. The British East Indian exports were of the value of £22,665, more than £4,000 better than in the same month of last year. The South African trade was better than in the same month of last year, but less than in the preceding month. The month's imports were of the value of £83,633, compared with £68,388 in June of 1912, and £77,341 in June, 1911.

In dealing with the figures for the six months, it has to be remembered that the 1912 figures offer no adequate comparison, owing to the coal strike stoppage. The total exports in the half-year were £1,707,577, as compared with £1,368,306 in the same period of 1912, and £1,498,739 in the same period of 1911. The Canadian shipments reached the splendid total of £254,239, as against £180,402 in the same half of 1912, and £190,356 in 1911. The United States business reached the aggregate of £205,213, compared with £117,997 in 1912 and £219,576 in 1911. The exports to South America (Brazil and the Argentine) were considerably better than those of the corresponding periods of 1912 and 1911. The total for the two countries was £322,497, which made a very considerable proportion of the half-year's oversea business, in fact, nearly one-fifth. The shipments to Australia and New Zealand reached the aggregate of £224,890, compared with £200,606 in the same half of 1912, and £208,391 in the same period of 1911. Business with British East Indies totalled up to £135,148, which was about £26,000 more than in the corresponding periods of 1912 and 1911. The South African trade was on a better level at £71,141, which represents an increase over the first half of 1912 of £16,000, and over the first half of 1911 of £10,000. The exports to France were considerably better than in the corresponding periods, but in the case of Germany the reverse was the case. With regard to descriptions of ware, more than half of the six months' exports was represented by earthenware, which showed a big increase over the corresponding periods. The shipments of china were also on a higher scale, but the largest increase obtained in the case of sanitary ware, the figures being :— 1913, £290,043 ; 1912, £226,361 ; 1911, £223,038.

The half-year's imports were of the value of £517,643, compared with £450,387 in the corresponding period of 1912, and £502,395 in 1911.

FACTORY INSPECTION.

IT was not so very long ago that there existed among manufacturers a distinct feeling of hostility towards Government Inspectors. These gentlemen were looked upon, justly or unjustly, as pompous and officious "Jacks in Office," who made arrogance a cloak for their ignorance, and were prone to meddle mischievously with matters beyond their understanding. Their visits were most unwelcome, and their behests were only obeyed under the imminent fear of the rigour of the law. Nowadays, however, as the voluminous report on the Factory Acts which we abstract in this issue shows, the majority of His Majesty's Inspectors are well versed in the industries with which they have to deal. With a fuller confidence, born of increased knowledge, they are prepared to persuade and to suggest instead of to dictate and to command. As a result of this change they are now received by manufacturers with much more toleration and their injunctions and restrictions are treated at the worst as necessary evils. We trust that the ameliorating process will be continued a few stages further. The Inspector, with his broad grasp of industrial operations and problems, should be able to make many recommendations which would result in an increased efficiency of staff and plant, and render the carrying out of the law in many cases a source of profit instead of an unremunerative expenditure. By so doing he may yet remove the last traces of an ancient enmity, and become, instead of the manufacturer's bugbear, his welcome and honoured "guide, philosopher, and friend."

THE COMPLETE CORRESPONDENT.

THE pottery dealer, though he (or she) is generally among the most respected members of the community, is not altogether free from some of the besetting errors of the trading classes. We need not take a very wide radius to obtain concrete illustrations of a lamentable disregard for order and method in the operations of pottery dealing ; on the other hand there are certain well-known houses in the trade, the staff of which might well be considered to be the victims of an all-consuming desire to be regarded as paragons of "smartness." The illustrations are both extreme, and consequently we may at once reflect that there is a happy medium. It is fortunate that such a medium exists.

Perhaps in no department of a business is the temperament of its members more clearly discernible than in the correspondence emanating from it. What a revelation would await both the types of business men referred to could they but have the advantage of witnessing unobserved the effect of their lack of balance upon the recipients of their communications! The manufacturer, who is often the target for the inflictions of these gentlemen, is, as a rule, a very human sort of individual, and in common with the rest of us, forms spontaneous likes and dislikes of his correspondents. He arrives at business in the morning, and proceeds to turn his attention to his mail. The first communication he handles is an inquiry of the sort which comes from the dealer of the type first mentioned. Oftener than not it is a postcard, the whole of one side of which, and half the other—nothing less than the Post Office regulations allow—is covered with almost undecipherable scrawl, which, with great difficulty and a certain amount of speculation, is understood to read : "Some time ago I sent you a matching—a cracked or broken cup, I think it was, though it may have been a muffin—labelled for what I require. When may I expect it ?" The recipient wonders at once whether the writer really does know when he ordered, what he ordered, or just the particular factory from which he ordered. If he be a large manufacturer, employing a crowd of warehousemen, each of whom deals with a separate and special class of goods, he instinctively feels that he would rather delegate this inquiry to his clerk than attempt to deal with it himself—and he is wise. The result is it is thrown aside with some disgust.

The second communication is the absolute antithesis of the one which preceded it. It might almost be termed system personified. It is a printed back order sheet, having specified ruled columns for "Date of order," "Particulars of order," "Date or dates already promised," and a blank column for the manufacturer to fill in when delivery may be expected. Nothing could be simpler or more admirably designed, providing always—and there's the rub—that this document were legitimately employed, and not used in such a way as to defeat its very purpose. If it were reserved for a few old outstanding orders, or with the addition of an important order or two which it might be very desirable to clear up promptly, it would be viewed and dealt with as a matter of some

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importance. But when, as is often the case, it includes every individual order the dealer has on his books with the manufacturer to whom it is addressed, certain of which may have been promised in the correspondence only a day or two previously, and not only so, but orders given by the dealer to the manufacturer's traveller or agent the day before, which have not had time to reach the factory, let alone the order books, it is not surprising that the document in question is tossed impatiently from one department to another, and eventually finds its fate in the warehouse "stove pot."

Neither of these classes of "correspondence" is calculated to invoke the sympathetic consideration of the manufacturer or his clerks and warehousemen. If the dealer would simply reflect, and try to be explicit without being redundant, it is certain that he would achieve much in his own interest, and in so doing would exert much less tension on the patience of the manufacturer. There is a Latin phrase which, being translated, reads: "The middle is the safest way."

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

THE GHENT EXHIBITION.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I write to congratulate you on the article in the current number of THE POTTERY GAZETTE dealing with the ceramic section at the Ghent Exhibition. I have been spending a few days there, and I think your report is excellent.—Yours, &c.,

July 19. "SUBSCRIBER."

A TRADE INQUIRY FROM CANADA.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—If you could give me the addresses of two firms who get out the cheapest blue and white ware, I will appreciate it very much. We are looking for an attractive and cheap ware for manufacturing a high grade marmalade.—Yours, &c.,

New Brunswick, June 26. IMPORTER (3070).

[Replies from our advertisers or subscribers will be forwarded to the writer of the above inquiry if sent to this office with sufficient postage.—EDS. P. G.]

STRAW AND PACKING CHARGES.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Replying to your July correspondent, "A Representative of a Progressive Firm": When a deputation from the China and Glass Dealers' Association visited the manufacturers in November last, they were told that the majority of manufacturers present were sympathetic to the deputation proposals, and that the matter would receive their further and full consideration when they met in the new year. Up to the present nothing further, to my knowledge, has been done, except by the six firms who wish to please their customers, and personally I think that these six should be given all the support possible.

Why should not the manufacturers make it as easy as possible for their customers? "A Representative of a Progressive Firm" can rest assured that we are not letting the matter drop at this, and we hope in the course of a short time to add several more to our list of progressive manufacturers.

We are surprised to read the remarks of "A Representative of a Progressive Firm" when he says that he has continually to keep stating "No straw and packing charges—everything included." If this is the case, we fully think it is high time these charges were included, because it is evident that the dealer had not been taking these charges into account previously.

It is time, however, that the dealers took a firm step in this matter, and we feel confident that we shall soon have more progressive manufacturers as their representatives are all in favour of it.

I shall be pleased to hear the opinion of any dealer on the above subject.—Yours, &c.,

W. NEAVERSON,
Hon. Sec. the China and Glass Dealers' Association of the United Kingdom.

Kirkgate, Huddersfield, July 24.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I note that in your July issue "A Representative of a Progressive Firm" discusses my letter which appeared in your June issue, on above subject.

Before discussing his reply, I should like to express the sincere pleasure and gratification I feel at the fact that this gentleman, as a manufacturer's representative, is sufficiently interested in the subject to do me the honour of replying. Unfortunately, the letters of the dealer, in your columns, are too often ignored by the manufacturers, to the detriment of the trade generally. Hence my keen appreciation in the present instance.

At first sight, the letter of "Live Representative" may appear to be a critical reply to mine; further consideration proves it, in reality, to be an eloquent endorsement of the arguments which I used.

He agrees that the incorporation of straw and packing charges in prices quoted for goods "is a step in the right direction." He rightly asserts, however, that "it is hard on the manufacturers who have adopted the new system (at the request of the China and Glass Dealers' Association), if they have to be the losers," and he urges that the Association should take a "firm stand on behalf of such manufacturers" and that "it is up against the Association to bring about a successful result." I heartily concur, and it was for this reason that—as a member of the China and Glass Dealers' Association—I wrote the letter in the June issue.

He further states that "some dealers show substantial approval, but the responsibility rests with the whole of them, if the new system is to go on." Here, again, he endorses my own argument. For, referring to the old system, I wrote:—"How long this is to continue lies with the dealers themselves. It is evident that manufacturers will not move, as a whole, until the united action of the dealers forces them." But, although our argument has this much in common, I would like to emphasise the fact that the present critical difficulty is due as much to lack of unanimous action on the part of the manufacturers as on the part of the dealers.

For, if the manufacturers had unanimously adopted the new system, which they approved as a whole, then the seeming differences between prices quoted for goods with straw and packing charges incorporated, and prices quoted to which straw and packing charges have to be added, would not have existed.

It resolves itself into this—that the present difficulty, in the way of the general adoption of this progressive step, is due to an old-world "conservatism," which seems to characterise many members of our trade; both among the dealers and manufacturers.

It is this "conservative" spirit that stands in the way of any progressive step in our trade; but it cannot,

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urely, be representative of the majority of retailers. It certainly not representative of the majority of the embers of the China and Glass Dealers' Association—hough there may be exceptions. The executive of ie Association fully appreciate the step taken by ie progressive manufacturers in the incorporation of raw and packing charges in prices quoted for goods, id fully realise the labour the revision must have in-olved. By every means in their power, individually id collectively, they are doing their utmost to support ese progressive firms. But every new movement eets with opposition at first, even at times by those in ose interests it is introduced.

The principle and advantages of the incorporation of aw and packing charges in prices quoted only needs be better understood—by dealer and manufacturer—receive fuller recognition. The principle is right. It a distinct advance on the old system of charging aw and packing as a separate item on invoice, and it much more in line with modern business requirements. ese facts are, I think, generally admitted. At least, no lid argument has been brought against them.

The general adoption of the system would be of great tual advantage to dealers and manufacturers, and uld remove permanently that vexed question of pack-; charges, which has been the cause of so much friction the past.

The initial step has been taken by six progressive firms, ause they believe the new system is more just, and ause they believed that the majority of the dealers ire it. In return, the progressive retailers throughout country should loyally support these firms, by reserv-their orders to them as far as possible.

n fact, if the dealers, as a whole, would refuse to buy n any manufacturers who had not made the incor-ation, the question would be settled at once.—

urs, &c.,

une 23. "LIVE DEALER."

ANSWERS TO CORRESPONDENTS.

one, Scotland [3062].—According to Bourry's "Trea- on Ceramic Industries" (which we publish) bones prepared for use in pottery by being dried, cleaned boiling in water, calcined until they are entirely white, then finally pulverised.

. F.—A complete piece of the ware will probably bear the bottom the name of the pattern as it is a printed , and in this case you may be able to find the same ur list of purchasers of Brownfields' patterns in THE TERY GAZETTE DIARY for 1903, which may be inspected his office. We may state that the list extends over columns, over one of which is devoted to patterns of rs which have been destroyed. We have not seen any oduction of the pattern since Brownfields gave up ness, and we fear the chances of your now obtaining pattern most remote. Should a complete piece not any name of pattern on bottom your only plan will o make a sketch of the piece or send the piece round all the earthenware manufacturers who purchased wnfield's patterns, and seek the information in this ; this, however, would be a big task.

quiries Answered by Post for :—"Grafton" china and saucers; tea ware, Reg. No. 333,746; plates ked "G. V. Co." beneath a crown; cone-shaped glass ks for flowers; tea set, Reg. No. 187,499; toilet ware, No. 325,184.——"Apple Blossom" dinner ware.

CORRESPONDENT'S INQUIRY.

022].—"Green Norman dinner ware.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are given in the July issue of the Board of Trade "Labour Gazette":—

THE POTTERY TRADES.—Employment in the pottery trades was fairly good on the whole. Returns from firms employing 14,749 workpeople in the week ended June 28 showed an increase of 2·0 per cent. in the number employed, and of 1·6 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago there was an increase of 4·4 per cent. in the number employed, and of 1·9 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	3,407	£4,022
Earthenware manufacture ...	8,846	8,337
Other branches (including unspecified)	2,496	2,391
Total	14,749	£14,750

Districts.	Number employed.	Wages paid.
Potteries	10,977	£10,142
Other districts...	3,772	4,608
Total	14,749	£14,750

In the china section employment showed some improvement as compared with a month ago, and a decided improvement as compared with a year ago. In the earthenware section employment in the Potteries district was not so good as a month ago and a year ago, an excess of labour being reported. In other districts employment was good on the whole. At Bristol and Newcastle-on-Tyne it was reported as fair, at Swadlincote as bad; in South Yorkshire it was rather better than a month ago. In Scotland it continued good.

THE GLASS TRADES.—Employment continued fairly good on the whole. Returns from firms employing 8,198 workpeople in the week ended June 28 showed an increase of 2·3 per cent. in the number employed, and of 8·5 per cent. in the amount of wages paid, as compared with the previous month. Compared with a year ago there was a decrease of 2·0 per cent. in the number employed, and of 3·8 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,727	£7,627
Flint glassware (not bottles) ...	1,829	2,110
Other branches...	642	729
Total	8,198	£10,466

Districts.	Number employed.	Wages paid.
North of England	825	£947
Yorkshire	4,503	6,054
Lancashire	875	1,053
Worcestershire & Warwickshire	1,066	1,302
Scotland	621	801
Other parts of United Kingdom	308	309
Total	8,198	£10,466

Employment in the glass bottle trade was reported as good in Yorkshire and at Glasgow, Portobello, Dublin, and Bristol. At St. Helens and on the Wear it was only moderate, some short time being worked. Employment was fair with sheet glass flatteners and good with sheet and plate glass workers at St. Helens, and with flint glass makers and cutters at Birmingham and in the Wordsley and Stourbridge district. With pressed glass makers on the Tyne and Wear it was only moderate, with short time, being worse than a year ago, though rather better than a month ago. With glass blowers in London it was fair, but not so good as a month ago.

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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

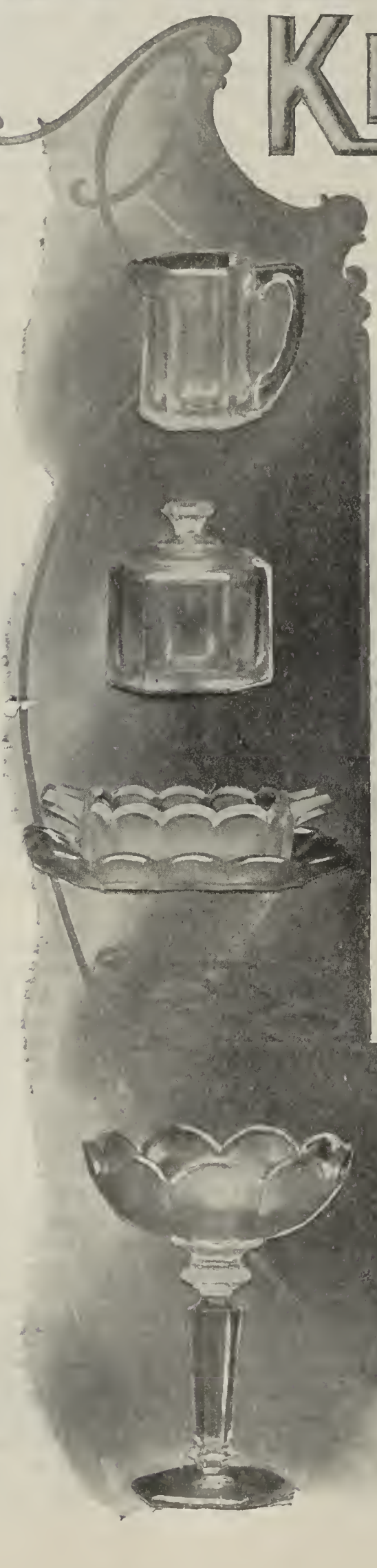
Wileman & Co. (The Foley China Co.), Longton, are represented in London by Mr. T. E. Taylor at Atlantic House, Holborn Viaduct (opposite the City Temple), and a call I recently paid them fully justified my expectations. This firm's china has always appeared to me to be characterised by several very desirable qualities, amongst the chief of which I imagine are clarity of body and grace and simplicity of design. There is a capital array of samples on show at the present time in Mr. Taylor's bright and well-ordered room, and they cover a wide range of designs, suitable not only for the home trade, but to the more elaborate needs of our Transatlantic friends. As a teaware house Wileman & Co. have for a long time occupied a position of eminence in the trade, and if the samples on show at Atlantic House are to be taken as a criterion, there is certainly little in the realm of practical decorative treatments to which the firm have not turned their attention. The range of tea and breakfast samples has not only the advantage of being comprehensive, but the individual designs are in many instances specially meritorious, and I believe I shall not be called up for saying that there are few showrooms concerned with a medium class china trade which can legitimately claim to have a larger variety of teaware patterns all of a distinctly saleable character. The tea and breakfast ware alone would have provided me with some interesting particulars, but I leave these for some future occasion to refer to some lines in the range of vases and ornamentals, which specially caught my eye, and which seemed to be particularly worthy of mention. These were embraced in a specific range of goods, some of the earlier productions of which were referred to in our pages a little over twelve months ago. I refer to that series to which has been definitely assigned the distinctive name "Intarsio." As the name will doubtless at once suggest, this particular scheme of decoration has been inspired by Italian art, and it emulates the inlaid works of artistic renown for which the world is indebted specially to the Italian race. I do not suggest that the designs are copied. I feel sure it would be more correct to say that Mr. Fredk. H. Rhead, to whom Wileman & Co. were mainly indebted for the introduction of the series, and his successor, Mr. Walter Slater, whose work is also freely represented in the many adaptations of the treatment on show, were merely inspired in their early efforts by the work of the Italian masters. The style of treatment is so extensive in its possibilities that I should imagine it would be a more tedious process to copy than to originate. Not only is the treatment capable of extensive variation to suit the freehand inclinations of the artists, for the general scheme of decoration is inherently capricious, and lends itself to modification at every turn, but the colours can be alternated in such a way as to produce constantly new effects. The decorations are essentially assertive without bordering on the blatant, and many of the adaptations result in charming combinations of colours, deep and rich in tone and quite captivating in effect. The "Intarsio" designs are all entirely underglaze, therefore, quite permanent, and they are produced on a body of a warm ivory tone, specially prepared for the reception of a glaze of soft and velvety texture, capable of accommodating an extensive palette of bright underglaze colours, including such striking tones as mauve, citron, olive, various blues, purple, orange and yellow, and sage, myrtle, and low tones of green. Some of the pieces are marvels of complexity in the direction of colour combination, but the whole of the tints are thoroughly blended and kept in skilful harmony. The variety is, moreover, as great in the matter of shapes as the design is in style of treatment, and some of these are exceedingly quaint, in fact, almost audacious, though alluring nevertheless. We illustrate five pieces. The piece to the right hand of the illustration is a font-shaped vase, suitable for the reception of either cards or flowers. I selected this piece, not because it is one of the very newest, but because it has proved a very good seller. The centre piece is a quaint squat vase of a Roman type having four slender handles. The tall shape vase with handle and cover assimilates a Chinese model in the South Kensington Museum, and the rose bowl at the left-hand side is an exceedingly fine piece, the colours of which are mingled in an especially skilful way. As the harmonious arrangement of colour constitutes the forte of this particular piece photography is woefully inadequate to reproduce it. There are quite a lot of other entirely new shapes on show in this particular class of decoration and from what I could judge, I should certainly assume that the "Intarsio" treatments have come to stay



WILEMAN & CO.: SOME NEW PIECES IN "INTARSIO." [*Photo. by "The Pottery Gazette."*

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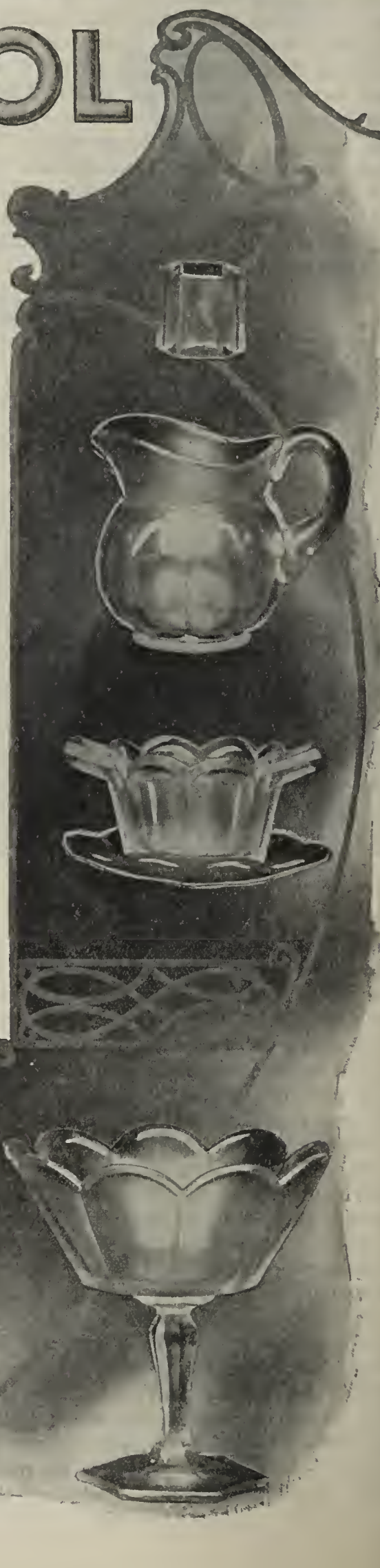
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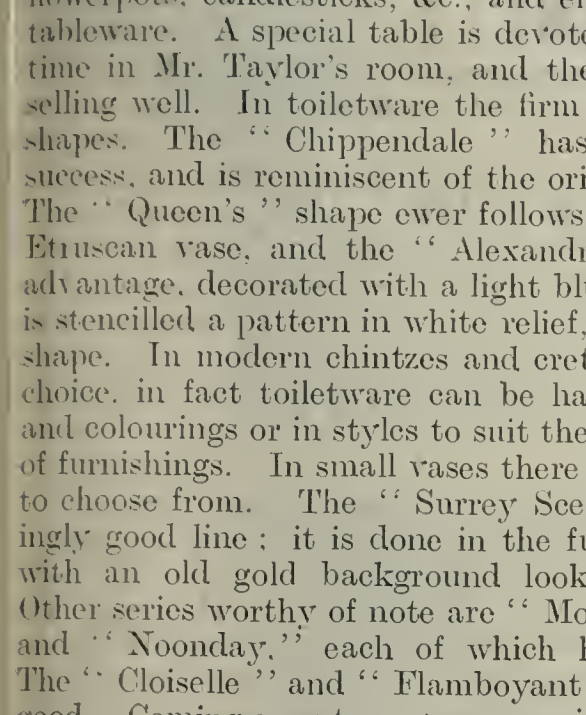
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The "Jacobean" ware, inspired by an old tapestry of the James period, is a decoration of a vastly different type, which, in order to secure uniformity, has been relegated to the region of lithography. It is supplied in toiletware, flowerpots, candlesticks, &c., and en suite in earthenware tableware. A special table is devoted to it at the present time in Mr. Taylor's room, and the design is said to be selling well. In toiletware the firm have some very good shapes. The "Chippendale" has been a very great success, and is reminiscent of the original Mother-of-Pearl. The "Queen's" shape ewer follows the outline of the old Etruscan vase, and the "Alexandra," which is seen to advantage, decorated with a light blue ground upon which is stencilled a pattern in white relief, is another very good shape. In modern chintzes and cretonnes there is a good choice, in fact toiletware can be had in modern designs and colourings or in styles to suit the severer ancient types of furnishings. In small vases there is an admirable range to choose from. The "Surrey Scenery" is an exceedingly good line; it is done in the full series, and treated with an old gold background looks exceptionally well. Other series worthy of note are "Moonlight," "Sunset" and "Noonday," each of which has a special charm. The "Cloiselle" and "Flamboyant" series are also very good. Coming now to a very prosaic conclusion, the firm make a speciality of nursery articles with well-known rhymes, included amongst which are series known as "Peter Pan," "Boy Scouts," and "Puff Puff." Blancmange moulds are also a strong point, and these have the advantage of being thoroughly uniform in thickness. I had intended to mention also the firm's china dinnerware, in which they supply some exceedingly choice designs, but I find owing to exigencies of space I shall have to forego this until some future occasion.

The United States Glass Company, 55, Farringdon-street, E.C., are always keen in producing something new and interesting. At the moment they have several lines on show to which particular interest must attach, inasmuch as they have a close connection with the campaign which is constantly being waged against the germ-transmitting, disease-inoculating fly. Everyone nowadays with the most elementary knowledge of hygiene recognises, of course, that the most zealous accomplice of infection is that small insect of the dipterous species, the fly. "Kill that fly." or to use a seemingly more powerful Americanism, "Swat that fly," seems to sum up the sentiment that the fly is no particular friend of the ordinary mortal, and every schoolboy to-day knows that the success and the progress now being achieved in connection with the construction of that wonderful undertaking, the Panama Canal, has only been rendered possible by an organised annihilation of the musical but insidious mosquito. All these things being conceded, let us now say that the two covered bowls shown in the accompanying illustrations are calculated to protect their contents from the ravages of the fly, and at this particular season, when garden parties are much in evidence, the utilisation of such articles would certainly tend to avoid the panic often created by the wasp in the jam. It will be seen that both these articles are covered. The neat cut glass bowl illustrated in Fig. I. is particularly adapted to stewed fruit, and the cover is supplied notched to take the spoon. The other illustration is of the 1913 improved fruit bowl, the rim of which is slightly cupped in, acting as a spoon rest. In this case the notching of the cover is rendered unnecessary, and evidently the poor fly, when the cover is applied, hasn't a ghost of a chance. The United States Glass Co. have many other interesting new lines.



UNITED STATES GLASS CO. FIG. I.



UNITED STATES GLASS CO. FIG. II.

R. H. & S. L. Plant, Tuscan Works, Longton, manufacturers of "Tuscan" china, specialise in the production of patterns derived from the early English factories of Bow, Bristol, Chelsea, Lowestoft, Plymouth, Nantgarw and Swansea, together with patterns inspired by the Chinese porcelains of the different periods, particularly Kang He (1661 to 1722 A.D.). One of their most recent series of productions is a line of vases of the Chinese designs belonging to the Ming, Kang He and Keen-Lung epochs, in which they have been able to imitate very successfully the old famille noire, famille verte, famille jaune and famille rose tints. In the last-mentioned they claim to have an exact reproduction of the tint which was exceedingly highly prized by the old Chinese potters. The series of vases now referred to was brought out specially for the Ghent Exhibition. The firm recently displayed also at the exhibition of pottery at the King's Hall, Stoke-on-Trent, when Her Majesty the Queen graciously commanded a selection of "Tuscan" china to be sent to Buckingham Palace, resulting in the purchase of sixteen vases. It is also noteworthy that when the exhibit, along with others, was transferred from Stoke to Harrods' Stores, London, the Queen was again pleased to make purchases from the "Tuscan" exhibit. Her Majesty's choice included a ginger jar, shape No. 134, pattern 1788, having a prunus design, arising from a rock base, the background being bleu de roi; a ginger jar having as decoration a Chinese Ho-Ho bird, also with a bleu de roi background; shape No. 141, in patterns 6800 and 6801, the former being a prunus and bird decoration with a background of Chinese pink, and the latter the same decoration with background of bleu de roi; and a miniature ginger jar, No. 188, the decoration of which was chosen by Her Majesty in all the colours in which it is produced. The five pieces shown in the accompanying illustration are representative of many others of a similar type now being produced in the "Tuscan" china, many of which are distinctly Oriental in character. The principal piece is vase No. 136, pattern 6822, and this is a facsimile of one in the possession of the Queen. It is manufactured both in famille noire and famille verte. A beautiful effect is produced in this vase by the contrast of flowers, leaves and rocks in at least five rich enamel colourings, including yellow, rouge de fer and three shades of green. The decoration comprises the yulan, magnolia, chrysanthemum and prunus flowers, with two Chinese golden pheasants, the female bird being



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Dear Sirs, Ferndale, Glam., 16/7/13.

I beg to thank you for the excellent way in which you carried out our order placed through Messrs. . . . . of Cardiff, in connection with the above function. The mugs have given every satisfaction, and travelled without one having been broken. The order was carried out very promptly, and no inconvenience caused in any way.

Again thanking you, yours faithfully, DAVID HANNAH.

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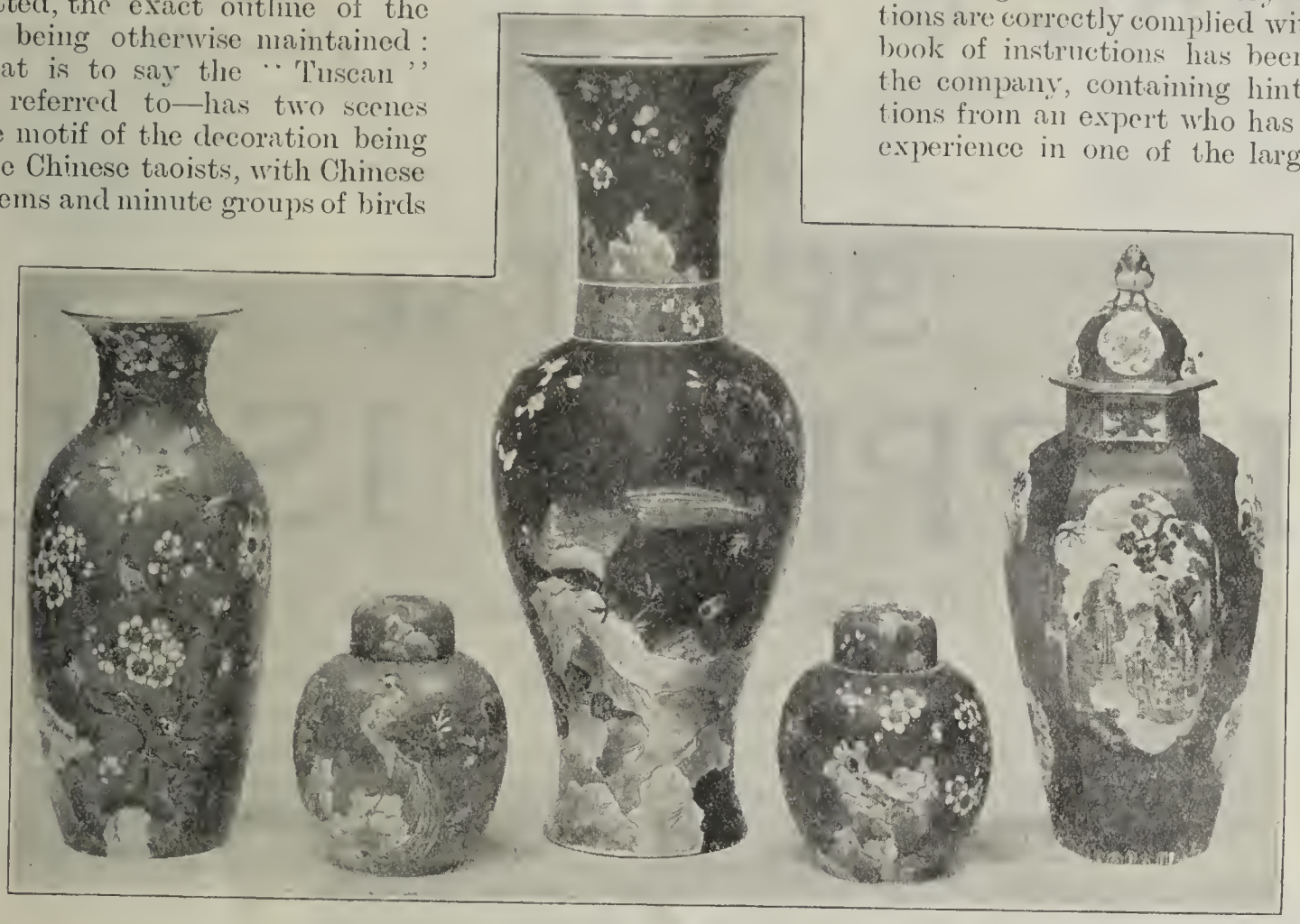
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on the nest and the male bird mounting guard. This particular bird was a favourite subject for Chinese porcelain decoration, and in the modern reproduction under review the brilliant plumage, which is seen at its best in the long tail, is attained by a striking contrast of colours in metallic hues. The other pieces illustrate shape No. 138, pattern 6854, which is a copy of the famous Bristol vase adapted to modern requirements, inasmuch as the fantastic handles and the flowers in raised clay are omitted, the exact outline of the original vase being otherwise maintained: this vase—that is to say the "Tuscan" reproduction referred to—has two scenes in panels, the motif of the decoration being taken from the Chinese taoists, with Chinese religious emblems and minute groups of birds and flowers; shape No. 141, decoration 6801, a rock prunus and flying birds scattered amongst the foliage — this design, both in pink and blue, was purchased by the Queen; two ginger jars, shape No. 134, decoration 6788, Chinese rock prunus and key border on a bleu de roi ground, and shape 134, decoration 6797, Chinese Ho-Ho bird on a ground of the same colour. Mogridge & Underhay, the London agents of R. H. & S. L. Plant, have a full range of all the new patterns on show at 11, Bartlett's-buildings, Holborn-circus, E.C., where those anxious to have an early delivery of the "Tuscan" reproductions for Christmas trade should make a point of calling at once.



CHINESE REPRODUCTIONS: R. H. & S. L. PLANT [*Photo. by "The Pottery Gazette."*

The International Bottle Co., 108, Fenchurch-street, London, E.C., are the sole makers of the "Universal" preserving jar. At this particular season of the year, when fruit is plentiful and cheap, home preserving is among the important hobbies of the economical housewife. Unfortunately hobbies usually entail serious incidental work, which, if not skilfully carried out, often results in disappointment to the amateur, in whatever particular direction the hobby may lie. Fruit preserving would be no exception, were it not for the fact that appliances have been brought out which largely simplify the processes involved, and which, when used with the observance of simple prescribed precautions, ensure a final result which is certain to be satisfactory. The "Universal" preserving jar has been specially designed with this end in view, and the proprietors claim for it a series of commendable qualities. It has no screw top liable to corrode or to collect dust; it has no shoulder, thus rendering the packing and emptying of the jar an easy operation; it has a wider mouth than many other preserving jars, thus allowing the passage of the largest fruit; it is constructed of specially toughened glass, capable of withstanding the wear of many seasons, the only part which it is necessary to replace being the rubber rings; no instrument is required to open the jar, this being performed by the simple operation of a rubber tongue; the contents of the jar are prevented from coming into contact with the rubber; the jar is provided with interchangeable glass lids, the rubber rings and clamps employed fitting all the different size jars that are supplied, and, finally, it has a perfectly flat ground ledge on which both the rubber ring and glass lid rest, which has the effect of achieving a perfect seal, providing that a few very simple precautions are correctly complied with. A concise book of instructions has been compiled by the company, containing hints and suggestions from an expert who has had a life-long experience in one of the largest preserving works of the country, and in this each necessary operation is minutely described, so as to ensure for the amateur that success shall follow each individual attempt. When home preserving is reduced to such a simple and reliable business, it is hardly surprising that the demand for preserving jars should be on the increase each successive season; and, as this is an established fact, there is no reason whatever why the enterprising china and glass merchant should not get the advantage of some of the supplementary business which is possible in this line during the continuance of the fruit season, the more so when it is pointed out that where desired the dealer's name can be branded into the article, giving him a free advertisement. The International Bottle Co. also supply other appliances which are helpful in domestic preserving, particulars of which may be obtained from them on application by readers of THE POTTERY GAZETTE.

Lingard, Webster & Co., Swan Bank Pottery, Tunstall, teapot specialists, are a manufacturing house devoting themselves entirely to the manufacture of teapots and teapot sets. In the course of a long practice they have earned celebrity for their high-class productions, and especially for the exceedingly bright and pleasing effects which they offer in their particular line of goods. They specialise in the manufacture of articles from the local clays of North Staffordshire, which are the base of the old Rockingham body, generally considered to have some subtle quality necessary to perfection in the art of teamaking. Whatever properties this clay may possess, it certainly results in the production of a pottery body which is more refractory than the ordinary run of white clays, and is consequently less susceptible to dangers attending sudden variations and extremes of temperature; it is accordingly an eminently suitable material for the manufacture of teapots, which, as every dealer knows, are often

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expected to be almost fool-proof. Whilst Lingard, Webster & Co. do not claim that their teapots will fulfil such an expectation, they do at least claim to employ a body which has a maximum of good qualities, and which is calculated to perform its functions admirably. This Rockingham body is not in itself pleasing, but they have by special study and experiment learned to cover it by coloured clays and glazes in such a manner that the body is entirely hidden, the effect produced being in some cases extremely beautiful. Their efforts have been attended by complete success, as may be gathered by the fact that they have twice found it necessary to remove to larger premises before settling at their present address. The writer recently inspected their warehouses at the factory, and was impressed with many of the lines contained therein, and particularly so with their green and silver decorations, which they claim to be at once the most pleasing and durable of all decorative schemes.



LATEST SHAPES IN TEAPOTS : LINGARD, WEBSTER & CO. [*Photo. by "The Pottery Gazette."*

The silver is permanent, and will not tarnish. Another speciality is their cream and gold treatment, which is a really charming combination. This ware has the outward appearance of ivory decorated with gold, but inside it is the same red Rockingham body as is the basis of all their productions. We illustrate four teapots, which are typical of some of their specialities. These are of the "Unique," "Eclipse," "Eton," and "Rugby" shapes. The decorated pot is the "Eton," one of the newest shapes they have produced, and its form is distinctly out of the ordinary. The decoration on this shape shown in our illustration is a very effective one, being treated in pale blue and marone colours on a darker blue and cream ground. The spoutless teapot with electro-plated mount is the "Eclipse," an article devised to facilitate the thorough cleaning of the teapot, and particularly to obviate the disadvantages of a fouled spout. The "Unique" teapot is the one made with a hole in the cover to hook over the top portion of the handle, for the sake of security whilst pouring. One of each of these two last-mentioned shapes was graciously accepted by Her Majesty the Queen on the occasion of the Royal visit to the Potteries, and the King was also pleased to interest himself in their advantages. The "Rugby" shape is practically the "Eton" inverted, or, to be more correct, the "Eton" was inspired by the "Rugby." The firm is offering many capital new lines which are well worthy of an inspection.

R. Johnston & Co., Ltd., 92-3, Fore-street, London, E.C., are table and fancy glass manufacturers who have been in the same line of business for the last half century, and who have been at their present premises since the year 1893. They have well-appointed sample rooms, which contain a wide range of patterns in glassware, both as regards quality and design. They claim to have been the first English firm to have imported Swedish glassware into this country; in any case, they have always made a speciality of Swedish glass. Seeing that they also import Belgian, Bohemian, and American glassware, they have naturally a wide variety of lines to offer, and especially in the better classes of glassware. They carry big stocks, and in many instances are able to supply orders right away. Not only is their trade concerned with ordinary household table glass, but they have also a magnificent range of lines



[*Photo. by "The Pottery Gazette."*

R. JOHNSTON & CO., LTD.: NEW "HURLINGHAM" DESIGN.

made specially for hotel purposes. When the writer had the pleasure of inspecting their sample rooms recently, he found the whole of one side of the principal showroom devoted to American glassware, the importation of which has evidently developed very considerably, and now forms quite an important branch of the company's trade. Amongst one of their many special lines was crystal glass with sheared or "driven" tops, manufactured after the English method. Some of their cut glass toiletware is exceptionally good, and they do quite a large trade also in toiletware of plain optic glass. Bohemian cut jugs are another line which they have thoroughly exploited, with the result that this now constitutes a very active branch of their business. In etched tumblers, bottles and ups and jugs, they have a capital choice to offer, and the same may be said in regard to expensively cut jugs, salad bowls and other table articles. They have a big range in the direction of flower vases, and they also supply flower holders for fitting into epergne stands. Samples of plain covered glass confectioners' jars I also observed in the room, as well as glass bowls of varying qualities for stands. In cheap etched sets, wines, tumblers, jugs, &c., they have a fine assortment, and in heavily cut crystal glass the Swedish productions are shown to marked advantage. I was particularly struck with some "G.R." monogram ware. They have some extremely good suites in cut, cut and etched, simple etched, and plain or optic table glass, and amongst these are the following well-known suites :—The "Aldwych," "Carlton," "Chatsworth," "Diamond," "Lorne," "Pall Mall," "Savoy," "Eldon," "Astoria," and "Waldorf." The "Pall Mall" is an excellent line in simple cut and etched, and of this they hold a stock in London or at the works for immediate delivery. Dealers are reminded to make up their stock early of this well-known pattern, as the demand becomes greater every year. The "Hurlingham" suite, of which we illustrate a decanter, wine-glass, tumbler, water jug and finger bowl, is one of the very newest lines in cut and etched glass, and of this a stock is held at the works. It is rather a difficult pattern to illustrate owing to its scintillating effect, but it will be seen that the incisions are deep and the etching peculiarly neat. I was impressed with the effect of an all-glass heavily cut lamp-stand and shade, fitted for electric light, which was on show in the room, and which, of course, serves a double function. It was indeed a beautiful piece of workmanship. The operations of the company cover an exceedingly wide territory, and I think what to me was a greater cause for reflection than anything else was the fact that they not only export Swedish glass to Australia and North and South America —the Argentine is particularly catered for by them— but they also import American glass into this country. The exchange of products in regard to America is certainly most interesting. The firm also import the real blue Delft earthenware and Limoges china, especially in toilet-ware, luncheon trays, and dessert sets. Dealers who have not already made the acquaintance of Johnston & Co., will do well to make themselves familiar with the many interesting lines they have to offer.

The Pottery Imports of Portland, Oregon, during 1911 and 1912 were valued as follows. The figures for the former year are distinguished by brackets :—Earthenware and china : Plain—United Kingdom, £1,237 (£2,147) ; Germany, £850 (£388) ; Austria-Hungary, £337 (£69) ; France, £36. Decorated — United Kingdom, £3,437 (£3,697) ; Germany, £5,172 (£7,200) ; Austria-Hungary, £1,032 (£646) ; Netherlands, £257 (£59) ; Japan, £1,224 (£834) ; Hong Kong, £167 (£143) ; France, £383 ; Norway, £264 ; Italy, £37.

MANUFACTURERS' ACCESSORIES.

(BY OUR OWN REPRESENTATIVE.)

C. MELIN & CO., 7, India-street, E.C., are sole agents for Mr. Paul Bornkessel, manufacturer of machines and apparatus for the glass industry, appliances for the laboratory and the workshop, air compressors, gas producers, &c. They offer something specially attractive in the Bornkessel Blue Flame Burner, which is claimed to have many advantages over the ordinary Bunsen, particularly in the direction of gas economy, flame homogeneity, and heat acceleration. These advantages are said to consist in the fact that the flame produced by the Bornkessel burner is fundamentally different to that produced by the ordinary Bunsen, which is characterised as unsteady in all parts of the flame, uncertain and somewhat noisy, whilst its chief disadvantage lies in its light-giving, non-heating inner cone, which results in a wastage of gas, one-third of the total height of such a flame being comparatively inoperative as regards heat production. The Bornkessel burner, on the other hand, is said to give a sharp and well-defined flame, the texture of which is regular throughout. The burner is so constructed that the mixture of gas and air is as perfect as practicable limits permit, giving a theoretically perfect combustion. The flame is homogeneous, giving a regularity and uniformity of heat which bespeaks economy in gas consumption. The heat, in fact, is said to approximate that of a blow-pipe burner. Any quality of gas and any air pressure may be accommodated by a simple adjustment, and the heat power can be governed from maximum to minimum without any back firing. Where specially high temperatures are required the Bornkessel burners are constructed for use with compressed air. Such burners are specially suitable for muffles, assay furnaces, crucibles, &c., and by their use 1,700 deg. C. can be exceeded, the special burners of this type being constructed of fire-resisting material. The different burners are made in stock sizes and in variously differentiated designs from single burners to combinations of units up to any desired number, which can be determined by specification. The Bornkessel cracking off and re-melting machines are also built to order to suit individual requirements. Over 90 per cent. of the works on the Continent use these machines for tumblers, screw pots, &c. In fact, there are very few works over there that have not one or other of the Bornkessel appliances in use. It is impossible, of course, for us to review here the many types of apparatus which are provided by this house, but we can confidently recommend our readers to obtain from Melin & Co., two pleasingly produced descriptive lists dealing with burners and machines respectively, for they contain many interesting statements and particulars.

The Sweepodust Co., Ltd., Southport, are manufacturers of a product to which has been assigned the distinctive name of "Sweepodust." It is an antiseptic, dustless-sweeping fibre, which should be of undoubted usefulness to pottery manufacturers and dealers alike. Its function, as may be gathered from the foregoing brief description, is to dry-clean, sterilise and disinfect, and by its use floors can be swept without the accompaniment of those objectionable and irritating fumes of dust which are so often associated with the process of sweeping. "Sweepodust" was on view at the Pottery Trade Requirements Exhibition recently held at Stoke-on-Trent, and our representative there who inspected it reports that "it is a material which would appear to be a boon not only to manufacturers and merchants, but to the housewife even, as it is a harmless fibre, suitable not only to the cleaning of wooden, stone and concrete floors, but also to the cleansing of rooms covered with linoleums and carpets. The proprietors

claim for it that it will refresh the colour and appearance of all kinds of floor coverings, whilst it offers the further advantage of sweetening and purifying stuffy rooms. It is said to be germ destructive, although its constituents are intrinsically harmless to the materials with which they are brought into contact, their only faculty being that of purification. It has the further claims of being labour-saving and economical in use, as a handful or two of the material is capable of treating many yards of flooring. It is put up in small tins to accommodate those customers who only require to use it in very small quantities, and also in quarter, half and full hundredweight bags to suit those who have greater uses for it, the larger quantities being subject to some modification in price.'' Pottery manufacturers may be reminded that Mr. Wm. Burton, M.A., in his recent lectures dealing with the problems of the potters' shops and the lead processes referred particularly to the urgent necessity of some sort of antiseptic aid to floor sweeping, and strongly advocated that manufacturers should experiment in this direction. We are able to say that the Home Office officials and the Chief Inspector of Factories, who viewed the exhibit of the Sweepodust Co., Ltd., at the recent Exhibition, were favourably impressed by the appearance and claims of their product. The company are specialising for potters' use by manufacturing an extra powerful dust absorbent called '' Potters' Sanolene,'' and where this cannot be used '' Floorolene '' liquid floor dressing is recommended as an alternative. Further particulars may be obtained by communicating direct with the company at their Southport offices, or through the leading stores, ironmongers and grocers throughout the country. The small shopkeeper need not be afraid of giving it a trial, for we are given to understand that the material has already won the confidence of many of the leading warehousemen, theatre proprietors, &c., and is in the constant use of many hospitals, schools and corporations.

William Varcoe & Sons, Ltd., whose head offices are at St. Austell, Cornwell, are clay merchants whose name is very familiar to pottery manufacturers in general. It is really technically incorrect to notice them under the heading '' Manufacturers' Accessories ''; it would be more strictly correct to include them in a column headed '' Manufacturers' Essentials,'' for china clay can hardly be considered as supplementary to the potting trade, seeing that it is one of the very fundaments of its existence. However, as we have no such column we deal with the matter here. The writer recently called at their Stoke-on-Trent offices, where two of the directors, W. and R. G. Varcoe, superintend the affairs of a very extensive trade with pottery manufacturers, following a calling the foundation of which was laid as far back as seventy years ago by their forbears. It was hardly with the idea of getting particulars from them as to the scope of their business that I called upon them, for I am well acquainted with the extent of their operations, and I can safely say that they hold a position of prestige in the merchandising of clay, not merely for the use of potters, but for many other industries. It was more with the intention of getting in a few '' feelers '' as to the state of present trade and the fortunes of the china clay industry in the immediate future, that I waited upon them. The result was a very interesting chat with the principals, in the course of which I learned that business in the Potteries has been exceedingly good, so far as they have been concerned, for the last twelve months, in spite of the fact that many difficulties have had to be contended with, such as advanced prices owing to labour unrest in the Cornish clay mines, which, unfortunately, does not yet seem to be finally subdued, although certain concessions have been granted to the men. I was informed that they are still fighting for a further increase, which means that the price of china clay has probably not yet reached its upward limit. More than this, high freights are likely to keep selling prices maintained at a high level. In this connection I had an interesting talk with Mr. A. P. Morse, the firm's Potteries representative, who has had considerable experience at the port of Fowey, from whence the china clay is shipped. He assures me that a principal cause of the high freights is the inadequate facilities which exist at the present time at Fowey for dealing with the loading of ships, though he considers that the high home prices are in a great measure indirectly due to the large exportation of china clay to America. It is no uncommon thing, I am told, to see a number of smaller boats, such as convey material to Runcorn for the Potteries, waiting outside the port at Fowey for days while a large boat of six or seven thousand tons capacity loading for America is got out of the way, and during the interregnum demurrage charges are going on apace, which finally have to be borne by the English consumer. The exportation of china clay to America is continually on the increase, and so long as the accommodation at Fowey is insufficient to deal with large and small boats simultaneously will the home consumer be called upon to suffer in the matter of freights. Extensive alterations are, I learn, in course of completion at Fowey by the Great Western Railway Co., amongst which is the construction of an additional jetty. What effect this may have in lightening the freights to the Staffordshire potteries remains to be seen. Coming back to Wm. Varcoe & Sons' trade, business on the whole, I am told, is duller at the moment amongst the potters than it has been for some months past, and the firm's out traveller, Mr. H. H. Till, reports that in Yorkshire and Scotland, which have recently been worked, trade is also considerably easier than for some time. It is quite possible, of course, that this falling off is in some measure to be accounted for by the disposition which is apparent in America to refrain from ordering until a settlement in some way is arrived at of the tariff question. Certainly all the American importers are holding off in the hope of replenishing their stocks at an abated duty. Wm. Varcoe & Sons' head offices in Cornwall are controlled by Mr. C. S. Varcoe, who superintends the distribution from the several properties of which they are the sole owners, amongst which are the Wheal Retallick, Wheal Benallack and Ennisavath China Clay Works. Like many other china clay producers, the firm are extending their works in Cornwall, and at their Wheal Retallick Works considerable improvements have recently been made, amongst which must be mentioned the sinking of a shaft to a considerable depth. An excellent white potting clay is, I am told, now being produced here, which is said to rival that of many of the larger china clay mines. At the Ennisavath works, which the firm have recently taken over, numerous important improvements are taking place in order to cope with increasing demands. A better quality of clay and larger quantities are expected to result. Although there has been such an extraordinary demand for clay during the last few years, Wm. Varcoe & Son have no apprehensions as to a scarcity. At the first mentioned works they claim to have a tremendous area of clay which has never been touched as yet, and although they are turning over no less than 100,000 tons of china clay per annum, a total which is being increased year by year, they see no anxiety as to the future. The firm are also shareholders in many other mines in Cornwall. They have recently taken over also mining felspar rights in Norway, and this department of their business is watched at the Stoke-on-Trent office by Mr. H. R. Sandberg, who reports considerable activity in the sales of hitterite and various felspars, for which greater uses seem to be

found as time progresses. Other agencies held by the firm include that for the Hamworthy Dorset Ball Clays, and that of Messrs. Bullers. Hanley, for stilts and spurs, the latter of which they have held for many years. The firm possesses a large cooperage at St. Stephens for the manufacture of the casks in which the best clays are packed for foreign shipment. It is strictly essential that some of the purer clays for special purposes, such as is used in the paper-making and bleaching industries, should be kept perfectly clean. This factory is controlled by Mr. Jos. Goldworthy, who also has the duty of superintending the Ennisavath Clay Works. The Wheal Retallick Works are managed by Capt. Bullock, C.C., who is thought to be one of the best authorities in Cornwall in regard to clay matters. Wm. Varcoe & Sons have also offices at Manchester and Brussels, the former being directed by Mr. A. W. Varcoe, who watches the interests of the paper making and bleaching works around Lancashire, and the latter by Mr. M. Schwyter. Sufficient, I think, has been said to show that the firm's interests in the clay industry are far-reaching, and that they are in a position to supply the potting, as well as other trades, on favourable terms with an article which cannot very well be done without.

THE U.S. TARIFF BILL.

(BY A MEMBER OF OUR STAFF.)

IN the present transitional state of the U.S. Underwood Tariff Bill it would be possible for a trade journal, such as this, to print a plethora of good "copy" obtained from merely noticing the arguments put forward by the supporters and opponents of the measure as to the merits and demerits of the Bill, and its consequences upon "Uncle Sam" if given effect to. Some of the speakers on the Bill have expressed marvellously divergent views, and it would be very difficult indeed to reconcile some of the statements made. We have been particularly interested in a controversy which has been going on in an American contemporary of late between Mr. Wm. Burgess, Vice-President of the United States Potters' Association, and Mr. Wm. S. Pitcairn, Chairman of Committee for Importers of English China and Earthenware. After all, it is, of course, only natural that the American importer and the American manufacturer should hold different views on the subject. Certainly there seems to be little doubt that the reduction of the tariff, if passed, will have the effect of considerably increasing the imports of English china and earthenware into the States, and to this extent manufacturers and importers are doubtless agreed. The point which, however, is more debatable, is whether the reduction of the tariff to the extent proposed is so drastic as to rob the American manufacturer of a fair protection.

Amongst other information recently published for the use of the Finance Committee of the U.S. Senate were two communications specially obtained for us by a correspondent in the States, which will doubtless be of interest to our readers at this juncture. The first is a letter addressed to Senator F. M. Simmons, Washington, by Mr. C. L. Casey, President of the Guernsey Earthenware Co., Cambridge, Ohio, in which he writes :—

"MY DEAR SENATOR,—We are very uneasy as earthenware manufacturers on account of the extreme cut in the Underwood Bill from 60 to 40 per cent. It is a question in the writer's mind if we can compete with the foreign labour. There is not any reason why we should make a strong argument along these lines, but we simply ask you to refer to the Treasury Department showing the statement of our earnings for the year 1912. You will readily learn from this statement, with the reduction on the tariff that if the Guernsey Earthenware Co. pays the same wages and has the same other expenses to maintain during the Underwood Bill as we now have, that our factory will be run at a loss of thousands of dollars. This is simply a business proposition. We have not anything to say as to what we are paying in wages, or what it is costing us to produce our wares, or what we are getting for our wares at a selling price, but it is up to the Finance Committee to investigate these figures and learn just what we can do as manufacturers in meeting foreign labour and foreign manufacturers. It is simply out of the question for us to do these things under the Underwood Bill without cutting our labour to meet foreign production and foreign labour. We don't like to do these things, but if it is necessary, in order to run our factory, we will have to do them. If you want any general information we will be only too glad to give you same regarding our manufacture, but you can very easily figure from our Treasury report just what we are doing and what we can stand in the way of a cut on the earthenware schedules. If you were to give us a duty protection of 45 to 50 per cent. under the Underwood Bill, it would place us in a much fairer position to do business, and at that duty it is a question in the writer's mind whether we could break even or not with the present wage scale. We sincerely trust that you will consider these questions fairly, and give the American manufacturer an opportunity to at least have an even break with foreign labour and foreign capital. Don't handicap us in our efforts. If there is any further information that you would like to have, we will be very glad to go into detail on this question and give you absolute facts."

For the other side of the question, Mr. Wm. S. Pitcairn, in a lengthy communication addressed impersonally to the Committee of Finance, says :—

"GENTLEMEN,—The big outcry and protest made by the domestic potters against the proposed slight reduction in the tariff on their products, made by their paid agitators, backed up by delegations of workmen crying ruin, &c., is simply astounding to people in the trade who are conversant with the true situation. We will endeavour, as briefly as possible, to show you something of the real facts and prove that their fears, if they be genuine, are groundless, and the workmen especially have nothing to fear for the following reasons :—England only produces earthenware that need concern the potters of this country. England is our largest customer. England buys vastly more goods from us than she sells to us. Almost everything we export to England goes in free of duty, unhampered by rules and regulations to harass the buyers and sellers. This being so, it would seem as though a little reciprocity and consideration for England's general relations with us should induce Congress to place a reasonable tariff on such products as would not interfere with the development of our own industries and give the American farmers, mechanics, and people of limited means an opportunity to have a little good English earthenware without being taxed to death for it. Apart from all other considerations, the geographical protection the American potters would always enjoy is in itself a big item of protection. The domestic potters know this very well, but make light of it in tariff arguments, but the facts remain that inland freights in England are high, ocean freights have practically trebled the past few years, consul fees, shipping charges, custom house entries, are all items that add to the cost. Furthermore, costs of production in England have advanced greatly of late, especially during the past year, due primarily or largely to the heavy advance in the cost of getting out the coal and advance in practically every kind of material that they use. These facts are indisputable. Furthermore, there

is no likelihood at all of prices going back to the old figures. On the contrary, everything indicates still further advances. We would call your particular attention to the fact that whenever costs of production advance in England prices of pottery are always instantly advanced, and the duty must be paid on those advances every time. The domestic potters have themselves admitted before the Ways and Means Committee in the past that the well-known values of English pottery made undervaluation practically an impossibility. We would impress upon you one indisputable fact, viz., that even before the heavy increases in prices of English pottery, the importations of same have been dropping off tremendously, as follows: From high water mark in 1895, when 121,000 crates were imported, to last year, when the importations were about 33,000 crates. Now that the above-mentioned heavy increases in prices have gone into effect, unless considerable relief is had through a reduction in the duty, importations are bound to fall off still more rapidly, and dwindle in a short time to almost nothing, and the American consumers be deprived of the privilege of securing good, sound English pottery at a reasonable price, and we believe they will resent it. Decals or transfers are the goods that are largely produced in this country. We make the assertion here that vast quantities of these goods are made in this country and sold to merchants, especially the scheme trade, 5 and 10c. syndicates, at prices from 30 to 40 per cent. less than similar goods can be imported for under the present tariff. This statement cannot be successfully disputed. We can prove it, and, being able to do so, it shows conclusively how groundless the fears and how senseless the talk that the slight lowering of duty from 60 to 40 per cent. will upset the manufacturers and cause them to reduce wages, &c. We make the statement here that on the class of goods that are produced in this market and the only kind they are capable of producing, if the duty on decorated dinner ware was put down to 10 per cent. English pottery could not be imported to undersell them. We make the assertion here, and can prove it, that if any pottery fails to make money now or under the proposed new tariff, it can only be from two causes—inefficiency, coupled with cut-throat competition amongst the domestic potters themselves, the latter being the principal cause of their troubles."

The writer goes on to deal with the staple line—white granite—produced in both countries, and the one used by the masses. By a concrete illustration—a crate of 600 dozen 7 in. flat plates—he strives to show that at the existing tariff the total landed cost of English goods, including all charges, would be $65.73, or, with the duty at 35 per cent. as proposed, $57.93. Now what they were told and believed the leading American factories sold the same quantity of goods for to the larger trade in the States was $44.91. The illustration of one crate of 7 in. plates was not any trick assortment, and was not exceptional. The same difference existed throughout the list, and showed the conditions of to-day on both sides. It would be seen by the above comparison how much cheaper the American potter could and did sell a given quantity of goods than the same could be imported for, and to the imported cost must be added the expense of doing business there, which was a big protection in itself to the domestic potters.

The writer proceeds:—

"A domestic potter in making his arguments, especially through his paid emissaries, generally figures in percentages. The prime cost of producing a plate is the making price, i.e., the price paid to the man who makes the plate. Roughly speaking, we will say that the price paid the maker of a 7 in. plate in England is 3c. per dozen; the price paid the domestic potter may be, say, 5c. per dozen, a difference of 2c. per dozen, which works out a big percentage; but let us see what it amounts to. On 100 dozen plates it comes to $2 difference in the making price; whereas, at the present rate of duty on this same quantity of goods, we have to pay $21.45 in duty, or more than 10 times in duty the difference in the actual making price on 7 in. plates, and under the proposed rate of 35 per cent. we would still have to pay in duty the sum of $13.65, which is nearly seven times as much duty to be paid as the difference in the making price of the plates. Now, we will admit freely that the amount actually paid the workman for making the plates does not cover all the cost of making same, but it is the important part of the cost. Such items as dipping, oven placing, drawing the kilns, and warehouse work are all items to be considered as affecting the cost of production on both sides, but they are all combined small matters as compared with the amount of duty on the goods, especially when you consider that the clay and all materials that enter into the body of the ware cost to-day almost as much in England as they do in this country; and on top of this, coal, which is next to labour the most important item of cost in making pottery, actually costs a great deal more to-day in England than it does in this country, as we will show later on. No doubt some materials cost a little less in England than here, but the difference in the method of handling materials is a big factor in the cost of same, for in this country the potters get their materials in large carloads, brought right into their yards, with, in most cases, no cartage or hauling charges and comparatively little labour, whereas in England materials are brought from a distance by canal at a very heavy freight rate, and in many cases are carted long distances up steep hills in small loads, which adds very much to the cost, and which item would not be shown in a comparison between the actual prices paid. We have it on good authority that the present price of English coal is $3.60 per ton; English slack, $2.60 per ton. We are told that the price of American coal to-day is $1.70 per ton; American slack, $1.30 per ton; and we wish again to emphasise the fact that coal is, next to labour, the leading factor in the cost of production of pottery, and the difference in the cost of coal alone is in itself large protection. Another serious item of cost on imported pottery is distribution of same. Most English earthenware is re-packed, which entails expensive labour, breakage, rent, insurance, to which add travelling expenses, &c. All of this adds still more to the natural protection the domestic potters are bound to enjoy in any event.

"Items showing why and how domestic pottery can be and is sold so much cheaper than English pottery and always will be at any duty that is likely to be assessed. For instance, nearly all decorated goods are gilded, most decorations nowadays have a big lot of gold on them, the value of gold being a big part of the cost of the finished article. Gold costs the same here as it does in Europe. We are sure it's substantially the same. When gold is put on earthenware in England we have to pay the high duty on the value of the gold as well as on the labour of putting the gold on. The same thing applies to chromo-lithographs or decals. This represents the bulk of the decorated pottery produced in this country. The potters import, we believe, most of the lithograph sheets. The duty on the sheets themselves is nominal or moderate, whereas when the same sheets are used for decorated English earthenware, we have to pay the high duty on the value of the sheets and also on the cost of putting same on the ware, as well as on the manufacturer's profit, the same as is the case with gold. All of this constitutes a very heavy tax at the proposed rate of duty, and explains

why the domestic potters can and do undersell English earthenware to such an extent that they are fast driving it out of the market. The records of importation will prove this without any further argument on our part. English earthenware is imported in crates. Crates are a covering necessary to transport the ware. On account of lumber being higher in England, crates cost more in England than they do in this country. When once used they are substantially worthless. For some mysterious reason, years ago a duty was assessed on crates. We have been paying more duty on crates than it costs the domestic potters for their crates, the packing of same and the straw used. This is disguised protection.. It goes beyond the realm of protection, in fact, it's a joker put into the situation years ago by a lot of adroit manipulators as additional disguised protection, and is on a par with the unsportsmanlike practice of taking a dead mouse from a blind kitten, the kitten in this case being the American public and consumers. There is no necessity, rhyme, or reason for this iniquitous, unnecessary tax. If the American public realised what it means they would rise up shouting the battle cry of freedom, with a lot said in same about duty on crates. We had hoped that the present Congress would relieve us and the consumer of this iniquitous burden, and we still ask, in the name of the American consumers, that this unclean, unnecessary burden be wiped out.

"We read in the papers that it is the intention of the present leaders in Congress and the President to restore competition, that the American people as a whole must not pay tribute to special privileges, special interests, or inefficiency, the ideas as expressed being that if any factories or interests were inefficient in their methods and required undue protection thereby, same be withheld in future.

"Theoretically it sounds good, and there is no doubt that the principles as expressed are laudable, and if same were applied to the earthenware schedule, the duty would necessarily have to be about 10 per cent. on white ware, 20 per cent. duty on decorated goods, with no duty on the crates, for actually there is hardly any commodity that we know of that has been so much over-protected as the domestic pottery, and the fact that the relief proposed is so slight shows that good lungs and a lot of adroit manipulators can impress Congress to the detriment of consumers and the thousands of merchants throughout the country who make their livelihood in whole or in part from the sale of imported pottery. Potteries and potters in this country are like factories everywhere. Some are efficient, some are medium, and some are thoroughly and hopelessly inefficient. All seem to be joining in the cry for more duty, the inefficient because they need it badly. There are potteries in this country that could not make money if the duty was 1,000 per cent. The efficient potter wants the duty based upon the needs of the inefficient potter, for reasons that will be apparent to anybody.

"We would ask why it is that if the potters were all going to be ruined by a reduction in the duty, how comes it that several immense potteries were projected at a time when they must have known the duty was going to be reduced, and the manufacturers that are building the new potteries and also acquiring interests in other potteries are in the front ranks of those crying for more and more protection, and those big potters are the factors for keeping down profits in the trade generally for purposes of their own, and the lack of profits among the potters is not due to English earthenware, nor could this possibly be the case. We wish to emphasise this statement to the utmost of our ability. The conditions that cause a lack of profits among them have been due to inefficiency, in some cases poor equipment, in many cases poor business methods, in all cases price cutting and general demoralisation, due to overbuilding of potteries. These facts are often admitted privately by the domestic potters' salesmen, but of course they don't talk that way when they appear before Congress with their pleas for more pap. Instead they talk in percentages and send delegations of their workmen.

"During recent years, especially of late, some potteries have acquired large tracts of land in outlying places and put up a large pottery on said property and deliberately started in to build up a town around it, selling the lots off at a large profit; in fact, in one or more glaring instances the profit from the pottery itself has been secondary; the big money came from selling building lots. Every effort is put forth to sell large quantities of pottery, often at outrageous prices, to attract labour and thereby create a big demand for the building lots. This has resulted in general demoralisation to the domestic potters' interests, and we emphatically tell your Committee that the troubles of the domestic potters come from such schemes and schemers and not from English competition on earthenware; and yet those same people are in the front rank shouting for more protection. It is supposed by many that in the long run, by demoralising the business, some of these people will acquire at cheap prices the other factories and ultimately, when they have foreign competition wiped out, they will be in position to compel the American public to use only their products, regardless of the quality or the price they demand for it. We are quite sure that many of the smaller potteries realise the above conditions perfectly.

"Of late years a very reprehensible practice has sprung up among a number of domestic potteries of misbranding their goods. These factories make earthenware only—in a number of cases they make a very ordinary brand of earthenware—and yet they have the effrontery to stamp or brand their goods as china. It is done to deceive the public. It is a clear case of false pretence and we believe is contrary to law, as it is contrary to all ethics. On this subject we will advise you that a protest is now being prepared by importers, wholesalers, and merchants, addressed to the Hon. William C. Redfield, Secretary of Commerce, asking him to look into this matter, and if the same is illegal, as we believe it is, that he take steps to put a stop to such practices. We would mention incidentally that those misbranding their goods as mentioned above are among those most insistent for more protection.

"There is almost no artistic development among the domestic potters, very little originality, nearly all dependent on foreign factories and foreign artists for designs, shapes, styles, &c., simply appropriating same as they arrive here each season, thus saving all the immense cost of foreign factories in maintaining a staff of artists, modellers, &c. For verification of all this we refer you to the United States Potters' Annual Report for 1911, page 27.

"In conclusion, we protest to your Committee that the proposed rates on earthenware of 35 and 40 per cent. are entirely too high and out of all proportion to the proposed tariff on other commodities. The rate we propose to the Ways and Means Committee of 30 per cent. would be amply protective, or if healthy, stimulating competition is desired, same would require a duty of 10 per cent. on white earthenware, 20 per cent. on decorated earthenware, with the iniquitous duty on packages abolished entirely. This would be for the benefit of the people of the whole country."

Whatever be the issue of the controversy, it has certainly brought out some very interesting statements. We shall be pleased to learn our readers' opinions on some of the points raised in the above abstracts.

A FEW CHINA SHOPS IN SOUTH DEVON.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

TORQUAY—(*continued*).

MR. C. H. MIDDLETON, 102 and 104, Union-st., Torquay, has a very nice business in china, glass, and hardware, which has been established twenty-seven years. He handles quite a volume of pottery, some of which is of a really superior character. He acts as agent for a number of good Staffordshire houses, and amongst the wares which I saw displayed were those of Doulton, Booths, Bishop & Stonier, Keeling & Co., and Burgess & Leigh. Glass ware of Mr. John Walsh Walsh and A. & J. Davies was also prominently shown. Mr. Middleton stocks ware of all qualities, but I formed the impression that the preponderance would be in medium lass lines. I was very much interested in the exceedingly ne range there was on show of individual supplementary nes for the tea table, principally in white china and hite and gold, of "Swan" and "Tuscan" brands. here were egg baskets, toast racks, covered butters, roth sets, sardine boxes—in fact, almost everything conivable likely to impress a customer as being something hich she has not got, and which it would be nice to have. a kitchen goods there was little one could mention which as not to be bought here—bakers, pudding bowls, entrée ish linings and general culinary wares, not to forget the rimwade patent quick cooker. In trinkets, rose-bowls, ad general fancies there was also ample choice, whilst t loose glass ware there was a prolific assortment, and ie shelves were laden with goods of a readily saleable character. The proprietor is assisted in the business by his son, Mr. B. H. Middleton, whom I saw in the absence of his father, and who kindly gave me all the information I needed.

IRELAND'S (late Brayley's), Union-street, Torquay.—This shop, as our photograph will show, is a well-appointed one, having a very nice frontage, whilst it is situated also in a very good thoroughfare. One would have thought so, to have seen me waiting on the Saturday morning on the opposite side of the street to get an opportunity of a snapshot without someone in front of the window, and even now half the photograph has had to be cut away in order to remove a few objects which were not, in the opinion of the editor, necessary to our illustration. Mr. Ireland took over the business shortly after Mr. Brayley's death some five years ago, but the concern is by no means a new one, as I understand it has been in existence for somewhere about thirty years, and is consequently well established. Mr. Ireland enjoys quite a nice turnover, especially in a direction of trade which appeals to the visitors. He reports very favourably on the summer trade of the resort, which he claims is considerably in excess of what it used to be. He is impressed with the attitude of the Town Council in popularising the resort, and is generally pleased with the outlook. Mr. Ireland was in the china business for many years before taking over the concern of which he is now the proprietor, and has, therefore, more than a superficial knowledge of his business. Vases and fancies appeared to be well represented, and the utility of some of the large flowerpots was well demonstrated by filling them with



MR. C. H. MIDDLETON'S STORE, UNION STREET, TORQUAY.

evergreen plants, having the effect also of greatly brightening up the shop. Mr. Ireland was attending to customers all the time I was in the shop, but I was pleased to snatch a few words with him. He speaks very highly of the class of trade done in the early spring, which is a really good class turnover, and he is by no means disappointed with the late summer trade, especially September and well on



[*Photo. by "The Pottery Gazette."*

EXTERIOR OF MR. IRELAND'S, TORQUAY.

into October. Wedgwood, Crown Staffordshire, and Royal Worcester wares are stocked by him amongst his fancies, and some good makes in dinnerware and useful domestic lines are handled.

PAIGNTON.

Within three miles by road and two by rail of Torquay is the small and ancient borough of Paignton, a select seaside resort, which one would imagine has a good future before it. It is so easily accessible from Torquay—besides frequent tram cars and trains there is a steamer service during the summer months—that it may be expected that pro rata with the expansion and development of Torquay will Paignton's good times come. Certainly few visitors to Torquay fail to take advantage of one or other of the several means afforded of running over to Paignton. The reasons for Paignton's present popularity are, perhaps, somewhat speculative; it may be due to the capital expanse of sands, the long and spacious promenade, the well-kept walks, and the picturesqueness of the surrounding scenery; it may be due to the development of the Palace Avenue Estate, possessing the ruins of the Bishop of Exeter's palace, and the old ivy covered tower, with which tradition associates the name of Miles Coverdale, and the first English translation of the Bible; but I should imagine that a more potent and practical suggestion to account at any rate for the large influx of day trippers into Paignton from the surrounding parts would be that it is "quite the thing" nowadays to call at the new Deller's café, which one must say is quite as well appointed as here and there one outside of London, and there to partake of afternoon tea to the strains of a fine ladies' orchestra. Anyway Paignton is popular and Paignton is fashionable, however controversial may be the reasons therefor. There is only one china shop of special importance, that being the establishment of

Mr. JASPER EVANS,

19, Palace-avenue, Paignton. It is impossible for me to say just how long this shop has witnessed the transaction of business in the china and glass line. I only know that it was taken over some seven years ago by Mr. Jasper Evans from Mrs. W. G. Couldrey, and that since then the business has been controlled and managed by Mrs. Evans. As may be gathered from the snapshot here reproduced the shop occupies the prominence of a corner of the Palace-avenue. It is directly opposite what, until quite recently, was the only post office in Paignton, and consequently has come in for exceptional notice on that score. The choice of site is always a very important factor to consider in the establishment of any business, and this possibly is of paramount importance in regard to a china business. But in addition to advantages of site, Mrs. Evans has laid herself out specially to cater for a high-class trade, and always offers some specially good lines, not only in souvenirs for visitors, but in useful services for residents. These facts in combination have resulted in the business becoming well known in the town, and everyone in Paignton requiring crockery at once associates with that requirement the name of Jasper Evans. As for the stock, I have to express admiration for all I saw. I have already hinted that the business is of a high-class character, and Mrs. Evans, whom I found to be a capable business woman, and who has been associated with business all her life, did not hesitate to show me round. It was the first time that I had had the pleasure of meeting her personally, though I had had an intimate idea of the class of business with which she has been identified ever since the transfer from Mrs. Couldrey—in fact, before. At the time of my visit the principal corner window was arrayed with toiletware, some capital toilet and trinket sets predominating, as the snapshot will show. The window to the left, situated in the Palace-avenue, was devoted in the main to souvenirs and ornamentals, of which there was a really fine assortment. The interior of the shop contained much to interest one. There was a centre fixture, the front of which gave pride of place to Royal Worcester, Copeland, Minton, and other high-class lines, mostly, however, in miniatures. As for services and general useful lines, there was quite a good showing of lines which do not need enumeration, though I may specially mention a fine variety of cut glass wares and the



[*Photo. by "The Pottery Gazette."*

MR. JASPER EVANS', PAIGNTON.

famous Walsh Walsh "Mother-of-Pearl." Unfortunately it was 9 o'clock on the Saturday evening when I interviewed Mrs. Evans, and she was just about to close—even a commissioner has to work sometimes—so that my notes necessarily had to be brief, but I can safely say that I was favourably impressed with everything that I saw. There are, of course, other businesses in Paignton which, shall I say, attempt to deal with china and earthenware

as a side line, and the town would not be complete without the universal domestic bazaar; but, so far as I could see, there was no business as yet worthy of being called upon in the interests of this journal and its readers, with the exception of the one under review.

NEWTON ABBOT.

Newton Abbot, situated only about five miles from Torquay, is chiefly important to-day as a centre of the clay mining industry, and as a railway junction from whence trains may be taken in a variety of directions to places of interest and of particular scenic beauty. Within a narrow walking radius of the town there is much to interest, but I dare not crave space here to specify all or any of them in particular. I only mention the fact in order to show that the town, although a country town indubitably, is of some real importance. I might, indeed, well have spent a few days here in reviewing the operations of the ball clay mines, but this would have been outside the scope of my present instructions. I think I should be correct in saying that the two principal china shops—in fact, the only two of any importance—are those which I shall refer to shortly hereafter. There was a third on the occasion of our last visit to the town some eight years ago, that being the business of Mr. E. Mudford. This gentleman, however, has another business in Tiverton, and to this he evidently decided to confine his attentions, and consequently withdrew from Newton Abbot. I should have liked to have paid him a visit at Tiverton, but unfortunately my time did not admit.

Middleton Bros., 78, Queen-street, Newton Abbot, have a nice business, which has been running for something like half a century. It was established by Mr. J. H. Middleton, the father of the present proprietors, W. J. and F. P. Middleton. It is concerned with wholesale and retail, and embraces glass, china and hardware. The shop, which is square and of good size, is well stocked, and covers all the usual lines, whilst the cheaper trade is catered for in Newton Abbot and Totnes markets, the former of which I visited, it being market day when I called. I there had the advantage of a talk with one of the partners. He kindly invited me to look round his shop, which I subsequently did, and I must confess that I was rather surprised to find that many of the better class manufacturers' goods were handled, and apparently found their market all right, although so far south, or should I say west? The window was well arranged, and contained a good show of Doulton dinnerware and "Tuscan" china, the latter being special reproductions of early nineteenth century designs, one of the principal of which was a diaper print with coloured sprays in panels, described as "a typical example of the patterns in vogue about 1800, when the manufacture of porcelain had become an accomplished fact in England, after the discovery of English bone porcelain." Also in the window was a Wedgwood dessert service which I thought extremely choice. It had a cobalt blue print border with a large hand-painted spray in the centre of each piece, and, moreover, it was a service at a popular price. Teasets in trays were well displayed, and there was quite a good show of miscellaneous china articles, amongst which I imagined that the "Shelley" china predominated. There was good variety to be had in ornamentals, indeed, in art flower pots there was quite a profuse show. There was also a good all-round selection of glasswares, both useful and ornamental. Middleton Bros. also lend china on hire, and undertake repairs, which is, one would think, a useful auxiliary in such a distant town. A photograph of the shop front will be found here reproduced.

The Mid-Devon Stores, Queen-street, Newton Abbot, are general house furnishers, and have quite a respectable china department in connection with their business, which particular department has, I understand, been established some 35 or 40 years. Originally it was devoted more particularly to fancy lines, and very little was done in the useful sections of the trade. To-day, however, it is very different, and they are doing quite an important trade in all sections. Mr. Hamilton D. Cordwent has charge of the department, and has himself been identified with the Mid-Devon Stores for about sixteen years. The china and glass window on the day of my call was stocked to almost every inch of its capacity with almost every conceivable article of domestic necessity. The goods were of a medium grade, and I should imagine that the business transacted here is of the class which is calculated to appeal to the majority of householders. Whether I may be right or wrong, there is no question whatever as to the bulk of the turnover in the department. Two large warehouses are utilised for accommodating the stock which the store itself is unable to display, and everything from the single article to the service of the largest composition is to be purchased here. The goods range from cheap to medium qualities, and are altogether of the cosmopolitan type which one is accustomed to find in conjunction with a hardware department under the same roof.



Middleton Brothers, Newton Abbot.

(To be continued.)

Glass and Earthenware in the Philippine Islands.—A British Consular report from Cebu says that "British and Continental manufactures are chiefly in demand still. Japanese glass and earthenware goods have been coming in, but qualities are very poor and they have taken little hold."

SOME SOUTH DEVON POTTERIES.

(BY A "POTTERY GAZETTE" SPECIAL COMMISSIONER.)

WHILST recently touring in South Devon, primarily for the purpose of gathering information concerning the retail shops there, I was reminded that there were several potteries in the vicinity, upon which it would be well worth my while to call. Consequently I decided to visit them, although to do so necessarily entailed some modification of my previously arranged programme, and as a result of my change of plans I was pleased to be able to secure some interesting information, which I now wish to place on record for the benefit of the readers of THE POTTERY GAZETTE, who, it may be assumed, are always intimately concerned with what is being done in manufacturing circles.

I doubt whether the readers of this journal, taken as a whole, have any real idea of the extent to which potting is prosecuted in some of those outlying parts of England in factories embraced under the comprehensive term "out potteries." There are many, even amongst those of us who boast of a fairly long association with the trade, who seem to have become inured to the idea that the manufacture of English pottery is essentially and almost exclusively confined to North Staffordshire, but, although the district commonly known as the Potteries is undoubtedly the metropolis of the potting industry, and I would not for a moment attempt to underrate its importance as such, it is really surprising how extensive, and almost illimitable, is the sphere of the activities of the potting trade.

Wherever one goes, to whatever country, and even into the most pastoral parts, one finds potting of some form or another engaging the attentions of the people. The universality of potting might well form a profitable theme for future discussion. It may be that the tractable properties of clay are, and always have been, amongst the earliest impressions conveyed to the constructively minded. Whatever the cause, the fact is obvious that clay working, broadly reviewed, is not a localised, nor even a national industry, but one which is common to all races, all countries, and all time. Sometimes the clays employed and the methods in vogue are more or less crude, and the finished article consequently coarse, ill-shaped and scant in elegance, though often strictly utilitarian, at other times the final product is delicate, shapely and artistic, and reflects a dexterity of touch which is distinctly hopeful and which bespeaks for it a prosperous future. With varying fortunes the potter is found working in all sorts of unexpected nooks and corners, and the more one travels and is on the lookout for him, the more impressed he becomes with the fact that one-half of the world does not know how the other half wags. I am perfectly persuaded that many of our friends in North Staffordshire, to say nothing of the large army of retailers and merchants engaged in the marketing of pottery products, would find their views considerably expanded and enlarged by visiting some of these "out potteries," even in South Devon, the land of scenery and sunshine.

Devonshire has, of course, long been regarded as the home of the motto ware, and it may be that many have the impression that the red clay specialities which one is accustomed to meet with nowadays at all the popular resorts, represent the sum total of Devon's ability to manufacture pottery. Not so, however; and to prove it may I advise those who have that idea to take a short railway journey from Newton Abbot Junction, along the Moretonhampstead branch, and alight at Bovey Tracey, one of a number of small rural stations on an extremely picturesque route, when one finds himself within easy walking distance of a factory responsible for the making of white domestic pottery on an extensive commercial scale.

Before attempting, however, to deal with concrete facts in relation to this particular pottery, may I be allowed to attempt to convey an impression which implants itself into one's mind immediately on leaving the train at Bovey Tracey Station, and which is more or less applicable to the whole of the South Devon Potteries, or at least, those of them which I have been privileged to visit. The situation is sublimity itself, and utterly remote from what one expects to find in association with a pottery. The village of Bovey Tracey veritably fringes the moorland, and high leafy hills, alternating with lovely valleys through which courses the narrow winding river Bovey, combine to present to the eye a picture of intrinsic loveliness. Reluctantly one turns his back upon the scene, buttons his coat, and with grim determination to forget everything but business, proceeds half-a-mile or so along the main road to Heathfield, and eventually becomes attracted by something which has a distinctly familiar appearance, and which one is accustomed to see in, shall I say, more suitable surroundings, a series of bottle-shaped ovens, the unmistakable index to the manufacture of pottery.



[*Photo. by "The Pottery Gazette."*

VIEW OF SECTION OF WORKS: BOVEY POTTERY CO., LTD.

THE BOVEY POTTERY CO., LTD., for such is the name of this concern, has been established for something like a century. In the short space of time which a limited train service allocated to me, I was unable, unfortunately, to rummage into the details of the inception of the pottery, consequently my notes must necessarily deal more particularly with recent events. I am, however, able to state that the undertaking was originally due to a Mr. John Divett, a shrewd and evidently keenly enterprising man, who apparently recognised that the resources of the district, so far as white plastic clay is concerned, were practically unlimited, and that beneath this clay there exists a belt of lignite, which he may have conceived would be useful for fuel. The latter, I believe, was tried, but how far the idea was warranted is doubtful. At any rate, I understand that at present it is not being utilised. However, the factory was built, originally on a small scale, and in the course of time was extended and improved in quite a remarkable way. Some eighteen years ago a limited company was formed ostensibly with the idea of further

extending and modernising the operations of the factory, and Mr. Wm. Robinson, the present managing director, was kind enough on learning the purport of my visit, to render me every opportunity of inspecting the whole of the plant and the processes employed. It was a much appreciated privilege.

Starting at the sliphouse, which is situated at a point much higher than the factory itself, and quite 500 yards afield, I was much interested to observe that it is driven partly hydraulically and partly electrically. At favourable periods of the year water power is mainly employed, and this water is brought down some four and a half miles from the Becky Falls in a millstream. At other periods of the year when water is scarce the assistance is invoked of the emergency and supplementary electrical plant. The whole arrangement was one which appeared to me to have been most carefully and thoughtfully considered, and I found the sliphouse throughout exceedingly well appointed. Alsing stone-grinding cylinders are freely employed, and a large grinder of a type which I have not previously seen, made by Bodley Bros., of Exeter, and specially constructed by them to the company's specification, is, I learned, found to be exceedingly effectual.

A somewhat peculiar feature, so it seemed to me at first, was that the flint is not ground in or near the sliphouse, but on the works, which I have already pointed out is some five hundred yards distant, and is pumped up from thence into the blunger through pipes. A later remark in the present article will perhaps tend to explain the reason of this. There are a number of the ordinary type of wooden filter-presses, which I was interested to see were supplied, along with many other appliances, by Wm. Boulton, Ltd., of Burslem. The bulk of the clay used is, of course, Devonshire ball clay, which is obtained at Kingsteignton, a closely adjacent clayfield, together with a certain proportion of china clay, not obtained, as I should have imagined, from Cornwall, but also from Devonshire in the neighbourhood of Plympton and Cornwood. It is thus peculiarly interesting that the whole of the clay used in the manufactures of this Devonshire factory is of Devonshire origin. The clay, after being blunged and pugged in the sliphouse, is run down to the works on a narrow gauge siding, the exclusive property and construction of the works.

Following the route of this siding, I was next privileged to inspect the mechanics' shop. It is only natural, of course, to conclude that a pottery situated in such an out of the way spot must necessarily be self-contained, and it is hardly surprising, therefore, that the firm should employ their own carpenters, joiners, and blacksmiths. What might, perhaps, contain an element of surprise is that they have also found it advantageous and even necessary that they should make their own bricks, and have now their own special plant for the purpose. Not only is this the case in regard to ordinary building bricks, but also firebricks, of which they make a very satisfactory quality.

From an examination of the brickmaking machines and brick-kiln, I proceeded to the plate-making shop, a long building which, in common with many other portions of the works, I found undergoing a process of alteration and improvement. The whole building is being raised by several feet in order to secure an improved ventilation. The processes employed I discovered to be of a most up-to-date character, and quite comparable with those of many of the well-known Potteries firms. The jollies and jiggers were of the latest type, and the dobbins on which the ware is dried were quite in keeping. The shop was to my mind an altogether creditable one, and when the contemplated alterations are completed I doubt not that the shop in question will bear comparison with those of many of the larger progressive concerns.

I was particularly struck with the fact that the women workers were exceedingly few, and on making inquiries I learned that there is a great difficulty in securing women labour in this part of the country, there evidently being a feeling in Devonshire that it is derogatory to the gentler sex to be identified with a factory. One wonders what some of these young ladies would think were they permitted to cast their eye along some of the shops in the Potteries, not only in the decorative, but even the clay processes.

I next visited the hollow-ware pressers, and I was again impressed with the number of modern appliances. I will not crave space to specify them all, but I would specially mention one of the most recently installed, that being a cover dish making machine which I was able to see in work. The facility with which these articles were being turned out by a man who had only been working the machine for a month was quite surprising, and it is claimed that not only is there an economy in production, but there is also greater uniformity of thickness in the finished article coming from the machine than in the hand-made article, and consequently the former is also less lossy in firing. So far as economy in production is concerned this is quite undoubted.

As to the conditions under which the potters work at this factory, I must say that I considered them to be most favourable. The shops were altogether much more comfortable than many I have inspected in various quarters. The atmosphere of the shops was certainly far less oppressive than one often finds obtaining in potters' shops. The workers are practically all local hands, trained on their own particular factory, and it was a little surprising to me that Staffordshire workers were conspicuous by their absence. As to the reason therefor, I believe, though I must apologise for the statement, that the Staffordshire potters who have tried their lot at Bovey Tracey from time to time have, by reason of the rural situation of the factory, found it necessary to be inordinately thrifty, and have yearned for an opportunity of reversing the condition of things. Sylvan scenery has for them apparently only a limited spell of charm, and they have preferred to have it occasionally at Rudyard than permanently in Devonshire. I must qualify this statement by remarking that I am not responsible for its origin, but only for its being recorded.

The decorating shops proved equally interesting to me, and the processes which I inspected included printing, aerographing and slip-painting. In connection with the printing, I noticed in operation a patent transferring machine for dealing with plates, a protected appliance devised by the firm's own engineer, Mr. V. W. Cox, which automatically transfers the design from the printing paper to the plate, and finally deposits the transferred plate into the washing off tub. It is evidently a machine suitable for the rapid printing of the cheaper classes of ware which are intended to be marketed in bulk, such as common pheasant ware.

Another feature which is well worth noticing is that the transferrers are not placed under the obligation of carrying their own ware from the biscuit warehouse, or "warum" as it is more frequently styled in South Devon. This is accomplished by means of a suitable tramway, and, moreover, the ware on leaving the printing shop is again trammed along to the hardening on kilns (of which there are several), and railed again from thence to the dipping houses. The idea forcibly reminded me of similar systems which I have had the good fortune to inspect on the Continent, and which seem to be well worth developing in all our English factories. Everyone

who has occasion to visit our leading factories is impressed with the fact that there is far too much carrying, resulting in a grievous loss of time and often much breakage. Another interesting point to notice was that the enamel kilns are built right abutting the decorating shops, so that the finished ware can virtually be handed from the decorator to the kiln fireman.

In connection with this point of economy in the matter of handling, I may say here, although it is somewhat out of order, that there is an excellent tramway system to convey the finished clay articles from the potting shops to the biscuit ovens, indeed, there is quite a network of sidings to convey the partly-manufactured articles from one set of operatives to another, and this system culminates only when the railway wagon is finally reached.

It may perhaps throw some light on what is to follow if the statement is made here that the Bovey Tracey Pottery is at present engaged, and has been for some years, in a serious process of reconstruction and modernisation. Those departments which have already come within the pale of the scheme are now thoroughly well equipped and up-to-date, and amongst many of these is the frit kiln. a construction which appealed to me as being distinctly creditable, and I am perfectly certain that it would be an eye-opener to many potters who are always keen on getting the best.

Earlier in this article I incidentally mentioned the mill. This has come in for a good deal of attention recently, and it is now of such a character that I can speak of it with the utmost admiration. Amongst other additions four new Alsing cylinders have quite recently found a place in it, and even the cylinder linings for these are being made on the works. An inspection of the mill fortified my impression that there was a valid reason for its having been built on the works instead of in the vicinity of the sliphouse. The latter is presumably too far afield, and some day will probably come under the ban of the modernising movement and find a more central position in the neighbourhood of the mill. When that is accomplished the factory will be as compact and concentrated as any I know of in this country.

And now as to the ovens. These also have been undergoing considerable reconstruction. A rapidly expanding business has necessitated the demolition of small types and the erection of more commodious ones. At the present time there are three 19 ft. biscuits, and still another is contemplated, so as to make it easier to comply with the new regulations as regards cooling; and there are also large glost ovens. Possibly the reconstruction work has of late been directed mainly towards the ovens. It may not be out of place just here to mention that the firm make all their own saggars from a local ball clay, and they appear to have a thoroughly efficient plant for the purpose. From what I could see they appear to have thoroughly solved the main difficulties of the saggar question. They prepare all their own marl and make their own wad clay.

A further evidence of the avoidance of undue handling of materials is offered in the fact that the coal for the ovens, which is brought from South Wales, is received from the railway company, and conveyed by private siding right to the oven mouths.

A word now as to the warehouses and packing houses. The whole of these are distinctly encouraging. I am permitted to reproduce a snapshot of the biscuit warehouse, which it will be seen has a good fan light, and is lofty and airy. As regards the glost warehouse, this, I think, compares very favourably with any I have seen. It is admirably fitted with pens for the reception of the different articles, and it is connected with the sorting house by the usual tramway. The packing house is conveniently situated right on the side of the railway line, and the railway wagons run into it and are loaded by means of a travelling crane.

A concluding note as to the trade. The factory is concerned principally with the manufacture of pottery of a strictly utilitarian kind, and at a price within the reach of all dealers. They specialise in printed ware, but have also some exceedingly bright and attractive lines in lithographs and aerographs, particularly in toiletware. The trade is not confined by any means to the southern counties, but extends as far afield as Australia, and large quantities of Bovey ware find their way to the North of England and to Ireland. From what I saw of the factory I am thoroughly convinced that the trade is a rapidly developing one, otherwise the structural alterations which are every one apparent on traversing the works would be unwarranted.



[*Photo. by "The Pottery Gazette."*

BISCUIT WAREHOUSE: BOVEY POTTERY CO., LTD.

(To be continued.)

A Mineral Water Co.'s Bottle Factory.—The report of Apollinaris and Johannis, Ltd., for the year ended March 31 last, states that the Rheinahr bottle factory has manufactured 32,500,000 bottles during the year, as against 30,100,000 in the previous year. The fourth furnace has been erected, at which two more Owens machines will be employed, bringing the total to seven machines. This new furnace is expected to commence production during the current month. The Owens European Bottle Machine Co., of Toledo, Ohio, have made a further return of capital upon the shares held by the Apollinaris Co., Ltd., amounting to £14,020. The Apollinaris Co., Ltd., having received this amount, have carried the same to capital suspense account towards providing the capital for the Rheinahr bottle factory.

COMMUNICATIONS FROM THE COUNTY POTTERY LABORATORY OF STAFFORDSHIRE.

XLIII.—THE BEHAVIOUR OF SOME GLAZES IN THE GLOST OVEN.—I.*

By J. W. Mellor.

1.—*Introduction.*

I HAVE collected together a few notes on glazes which will probably prove of interest. In many cases the facts are well known, but I have tried to present the isolated facts as parts of a connected story—the behaviour of glazes in the glost oven.

I have sought to get some idea of what changes the glaze undergoes while it is being fired in the glost oven. The firing commences with the biscuit ware covered with a film which is a heterogeneous mixture of particles of the different glaze constituents, illustrated by Fig. 1. This represents a diagrammatic cross section through the unfired glaze and biscuit body. We finish with the matured glaze which covers the ware with a glass-like film. The finished glaze may be regarded as the final act in a remarkable sequence of changes, the character of which is obviously determined by the ultimate composition of the glaze; the way the glaze is compounded; the average grain size of the glaze constituents; the nature of the body; the rate at which the temperature rises; the nature of the oven atmosphere at different stages of the firing, &c.

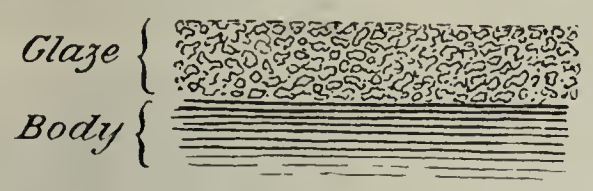


Fig. 1.—Diagrammatic Section of an Unfired Glaze on the Body.

2.—*The Method of Observation.*

We can get a rough idea of the changes by drawing pieces from the glost oven at different periods of the firing. The rapid cooling fixes the glaze so that its condition at the time it was withdrawn can be inferred by direct observation. Again, the surface of the glaze can be examined through a 2 in. to 4 in. objective, all the time the glaze is firing, by means of an apparatus like that illustrated in Fig. 2. A central core of earthenware is wrapped with nichrome wire, and so arranged that the ends of the wire can be connected with the electric current in the usual way. This core is embedded in a bed of calcined flint, packed in an ordinary flower pot. A pyrometer is fitted as shown in the diagram. The glazed tile under observation rests on a support in the central tube. The tube is closed with a sheet of mica or a quartz plate, and the microscope, with its objective cooled by a water jacket, is mounted above.

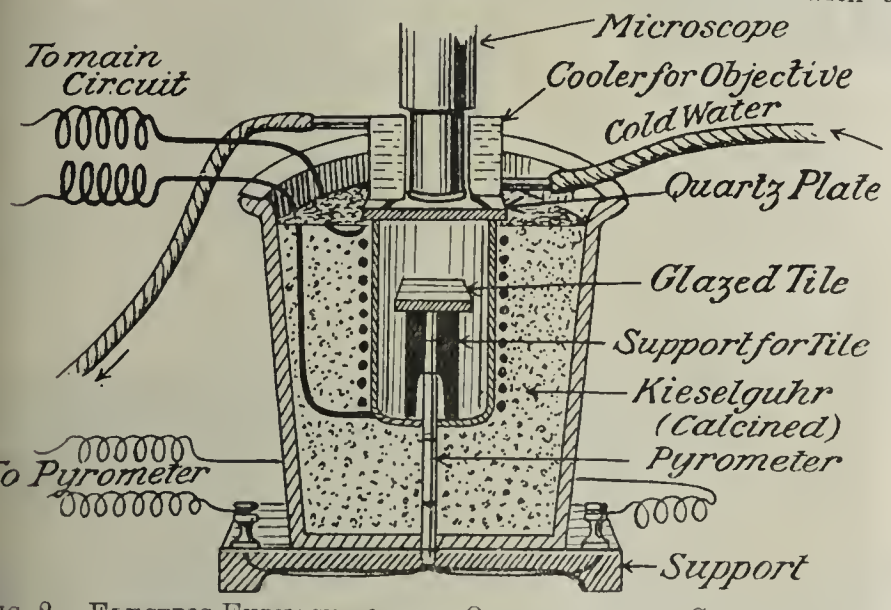


Fig. 2.—Electric Furnace for the Observation of Glazes during Firing.

3.—"*Raw Lead*" *Majolica Glazes.*

It is convenient to start with a simple raw lead glaze of the type:

$$PbO : 0{\cdot}15\ Al_2O_3 : 1{\cdot}75\ SiO_2 \qquad \text{I.}$$

compounded from red or white lead, china clay, and flint. *En passant* it may be observed that red and white lead are converted into lead monoxide, PbO, when heated below 600°; and lead monoxide melts at about 880°. Curiously enough, if lead oxide be heated in contact with siliceous materials the two begin to react below 700° and form fusible lead silicates. *Molten* lead oxide is a powerful solvent for siliceous materials, and it dissolves the other materials somewhat rapidly. This vigorous action is one important characteristic of raw lead glazes, and it enables these glazes to mature quickly. Molten lead glazes are fluids mobile enough to rapidly spread over the surface of the ware and to produce a film of glaze with a uniform smooth surface.

4.—*Earthenware Glazes: "Raw Lead."*

Such a glaze, however, is not suited for earthenware, bone china, &c., because: (1) It is liable to run; (2) it attacks underglaze colours somewhat vigorously; (3) the surface of the glaze is easily scratched, &c. Glazes for the ware just indicated are made more complex with a view of rectifying these defects. We can take as a type:

$$\left.\begin{matrix}0{\cdot}25\ (KNa)_2O\\ 0{\cdot}35\ CaO\\ 0{\cdot}40\ PbO\end{matrix}\right\} 0{\cdot}2\ Al_2O_3 \left\{\begin{matrix}3{\cdot}0\ SiO_2\\ \\ 0{\cdot}4\ B_2O_3\end{matrix}\right. \qquad \text{II.}$$

The soda is introduced as soda ash and borax, lime as whiting, &c. Accordingly, much more work must be done in the glost oven before the glaze matures—gases from the decomposing carbonates, &c., must have ceased bubbling; sufficient body must be dissolved by the glaze to bring glaze and body into harmony; and all must melt together to form a uniform film of glaze on the surface of the ware.

When glazes of the above type are exposed to a gradually rising temperature the more fusible constituents first sinter together, and gases from the decomposing carbonates, &c., are given off. The glaze then appears as a bubbling frothing mass, illustrated by the diagrammatic section, Fig. 3. The dark spots are intended to represent undissolved constituents. The bubbles rise to the surface, expand, and burst. The bubbling gradually slackens down, and, if the glaze be not too viscid, the scars left by the bursting bubbles, &c., when nearly healed give the surface that *egg-shelly appearance* characteristic of "easy-fired" ware. If the molten glaze be not too viscid, the scars finally disappear, and the glaze presents a uniform smooth surface, although numerous air bubbles can often be detected when the glaze is viewed through a small hand lens. If a bubble rises to the surface, and bursts rather late in the firing, the glaze may not have time to heal the scar before it is congealed by the cooling oven. The result is a *pin-hole*, *bleb*, or bare patch. Hence it follows that a considerable amount of work has to be done in the glost oven before the glaze is properly matured.

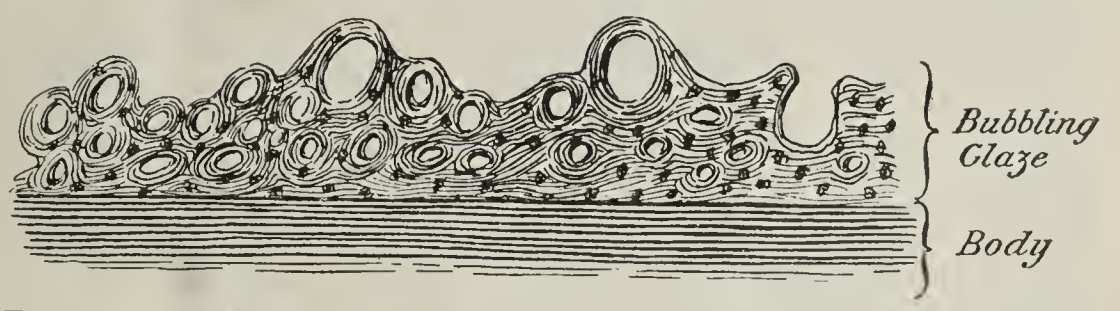


Fig. 3.—Diagrammatic Section in early stages of the Firing of certain Glazes.

In order to lessen the work to be done by the maturing glaze, it is usual to do part of the work in the frit kiln. The complex glazes for earthenware and bone china always contain some frit. It is not my purpose to here discuss all the principles which decide what materials shall be fritted, and what left for the mill mixing. It is obviously advisable to frit materials which are most liable to give off gases while the glaze is melting, and to frit those materials which dissolve in the glaze rather slowly. There are certain practical advantages in making the frit as fusible as possible, although this principle can be carried too far. A very fusible frit is liable to form a vitreous skin on the upper surface of the glaze before the underlying constituents have decomposed. Serious disturbances afterwards occur when the gases burst through the surface skin.

5.—*The Blistering of Glazes.*

A well-known cure for one type of blistering is the addition of china clay; or transferring some china clay from the mill mixture to the frit. I must confess my surprise at the effectiveness of the remedy. At first sight it seems as if the fault should be cured by making the glaze less viscid and more fusible, so as to get the blistering, &c., completed earlier in the firing. If the argument were valid, stiffening the glaze by the addition of china clay should aggravate the difficulty. I believe that the china clay acts by keeping the glaze more open—porous if you like—during the period the gases are given off, and this reduces the risk of forming gas bubbles in the glaze near the finishing temperature. I do not doubt the fact, but the explanation may be all wrong. Of course,

* From *Trans. Eng. Cer. Soc*, 11, 1, 1913.

if an excess of clay be added the increase in the viscidity of the glaze may produce a somewhat similar but not analogous defect. The use of a smoked frit furnishes an interesting example of what is meant by keeping the glaze open. The smoke entangled in the frit may hinder the sintering together of the glaze constituents. Such a glaze cannot run together to form a smooth film until most of the smoke is oxidised. Hence, ware glazed with such a frit, and fired under normal conditions, may appear underfired, although a glaze of exactly the same composition with an unsmoked frit and fired in the same saggar may be properly matured. (Examples shown).*

6.—*Earthenware Glazes*: "*Fritted Lead.*"

If the lead oxide in a glaze be all fritted, and not used raw, its activity is diminished. Such glazes do not attack the body so quickly, nor do they mature like raw lead glazes. This is particularly the case with so-called *low solubility glazes*. This statement is not incompatible with what I have previously said about fritting. The "raw lead," in general, appears to be able to attack the body more quickly when mixed with frit, &c., as a mill mixture, rather than when the "fritted lead" is used for the mill mixture. Fritted lead glazes in the early stages of the firing often form a skin on the upper surface. This tendency is not so marked with raw lead glazes. Hence, other things being equal, a glaze compounded with a low solubility frit does not mature in the same way as a glaze with the same ultimate composition in which the lead is used raw. Some of the borates also do their work comparatively quickly.

There is a little evidence which inclines me to the view that, other things being equal, fritted lead glazes do not generally show the same "flash" on the surface as raw lead glazes unless fired at a slightly higher temperature. This seems to be related with the earlier "skinning" over of the surface of fritted lead glazes.

Lead glazes, matured slowly, do not usually show such bright sparkling surfaces as rapidly matured lead glazes. The phenomenon appears to be an effect of at least two causes.

(1) It has been demonstrated in a previous paper in the *Transactions* that the surfaces of fusible silicates melt at a lower temperature than the interior. This and the surface tension cause such glazes to present a particularly bright sparkle. The phenomenon is well shown when "stone trials" are fired. It is what we have to fight against when matt glazes are desired.

(2) The surface of a lead glaze is constantly losing lead, &c., by volatilisation, when it is being fired, and in consequence, once the surface of the glaze has developed, it becomes duller and duller the longer it is fired.

Hence, altogether apart from dangers arising from devitrifaction, it is important, once the glaze is matured, to cool the glost oven as rapidly as possible without risk of dunting, &c., in order to lessen the risk of dulling the surface by volatilising lead, &e. The dulled surface can only be brightened by refiring the glaze at a higher temperature than before, followed by rapid cooling. In the ideal case, the frits and mill mixture should be so proportioned that the glaze has done the necessary work on the body at the same time as the surface of the glaze has attained its maximum brilliance.

7.—*The Sucking of Glazes.*

There is an interesting side issue. The vapour pressure of a fluid in a confined space is always the same provided the temperature is constant. The higher the temperature the greater the vapour pressure, and conversely. A wadded glost saggar may be regarded as a closed vessel, and the molten glaze may be regarded as a fluid. Suppose the saggar is "unwashed." Vapour of lead oxide will pour from the surface of the glaze until the vapour pressure of the lead oxide has reached a certain constant value. This state of affairs is necessary for equilibrium. The saggar walls will rapidly combine with the lead oxide vapour, remove lead oxide from the atmosphere in the saggar, and thus reduce the pressure of the lead oxide vapour below its equilibrium value. More lead oxide vapour will rise from the surface of the glaze in order to restore the equilibrium pressure. As a result glost ware fired in an unwashed saggar will have a dull dry surface.

If the inside of the saggar be smeared with a saggar wash rich in lead, much of the lead required to keep the pressure of the lead vapour inside the saggar up to its normal value will come from the saggar walls, and but little will come from the ware itself. There is also less vapour lost by absorption since, assuming that the bottoms of the saggars are also smeared with "lead wash," the only way lead oxide vapour can be lost is:—(1) By escaping *via* the cracks, &c., in the wad clay and saggar walls; (2) By absorption of the wad clay; (3) Absorption by the cranks, stilts, thimbles, &c.; and (4) Rapid absorption of "lead wash" by the saggar itself.

The thimbles, stilts, &c., are a constant source of danger. The spur of a thimble is in close proximity to the surface of the glaze, and, if the stilts be easy fired, or if the body be not vitreous enough, a comparatively large amount of the lead oxide vapour is sucked up by the thimble. The pressure of the lead oxide vapour is reduced in its immediate neighbourhood. Lead oxide vapour rises from the leaded walls of the saggar and from the surface of the glaze to restore the equilibrium pressure. As a result, the glaze may appear "sucked" or "dry" in the vicinity of the thimble. The action may be quite violent under bad conditions, for it is not at all uncommon to find the glaze "blistered" as well as "dry."

At any given temperature, nature demands that the pressure of the lead oxide vapour inside the saggar be kept up to a fixed and constant value—nature does not care whence comes the supply. The potter tricks nature, so to speak, by letting her take much of what she wants from the saggar wash and but little from the ware.

In some leadless glazes fired in "lead washed" saggars these conditions are reversed, for now the "lead wash" fills the saggar with vapour and the surface of the glaze absorbs the vapour. But "sucked saggars" is not on the list of the diseases of pottery. I must add that some leadless glazes are not improved by firing in lead washed saggars.

What I have said about glost ware in proximity to the thimbles applies also to ware in the vicinity of imperfectly washed saggar walls, wad clay, unwashed saggar bottoms, may be cracks in saggar, &c. The ideas can also be extended to enamel kiln firing, and I would not say that the "fried edges" of tiles could not in *some* cases be traced to sucking by the *clean* edges of the tile.

8.—*Leadless Glazes.*

Let me return after this digression to the glaze itself. It will be remembered that I have emphasised the special properties of lead oxide (and of some of the borates) in facilitating the rapid maturing of the glaze. In the case of leadless glazes for earthenware and bone china, the reactions between the glaze constituents are slow, and, in consequence, a relatively large amount of frit is needed in order that the glaze may mature in a reasonable time; but even then, with practically all types, the molten leadless glaze gets to work very much more slowly than glazes containing lead. The molten glaze is also so viscid that it levels up scars, &c., very slowly. These facts are well known to potters.

Nearly all the possible changes have been rung with the ordinary commercial glaze constituents, and the best results have been obtained with glazes containing relatively large proportions of boric oxide. The old type of leadless glaze was closely related with the typical earthenware glaze. These glazes were built on the type:—

$$\left.\begin{matrix}0{\cdot}55\ CaO\\ 0{\cdot}45\ (KNa)_2\end{matrix}\right\} \quad 0{\cdot}35\ Al_2O_3 \quad \left\{\begin{matrix}3{\cdot}0\ SiO_2\\ 0{\cdot}5\ B_2O_3\end{matrix}\right. \qquad \text{III.}$$

Such glazes will not carry much more than half an equivalent of boric acid without developing "milky" or turbid patches. Glazes built on this type:—

$$\left.\begin{matrix}0{\cdot}55\ CaO\\ 0{\cdot}45\ (KNa)_2O\end{matrix}\right\} \quad 0{\cdot}55\ Al_2O_3 \quad \left\{\begin{matrix}3{\cdot}5\ SiO_2\\ 1{\cdot}2\ B_2O_3\end{matrix}\right. \qquad \text{IV.}$$

are not so troublesome as the old leadless glazes when fired in ordinary earthenware glost ovens (cone 3a); but even these, the best we can do at present, are not nearly so reliable as the typical earthenware glaze.

Comparing these two glazes, it will be observed that in the latter the boric oxide is much augmented, and the alumina increased to prevent devitrification. If the boric oxide of IV. be increased much further the glaze is inclined to blister; and if the silica be made much lower, the glaze is liable to craze; if the lime be made much greater, the glaze does not mature; and if the alkalies be much increased the glaze becomes less stable. Experience shows that with this type of glaze the greater the proportion of frit in the mill mixture the better the resulting glaze, and this even in the extreme case where everything is fritted.

With some types of glazed ware—say once fired stoneware, and hard porcelain—a protracted firing is needed to "get up" the biscuit, and there is no particular advantage in the use of lead compounds. Indeed, lead glazes are not always suited for such ware. So far as I can see, this is due to the fact:

(*a*) Lead oxide rapidly volatilises at the firing temperature of the body; and

(*b*) The lead oxide does its work too quickly, and quick work is not needed, because

(1) The glaze must be kept heated until the body is fired; and

(2) The glaze should not mature much before the biscuit. Hence, such glazes have usually a low proportion of frit, and are free from lead compounds.

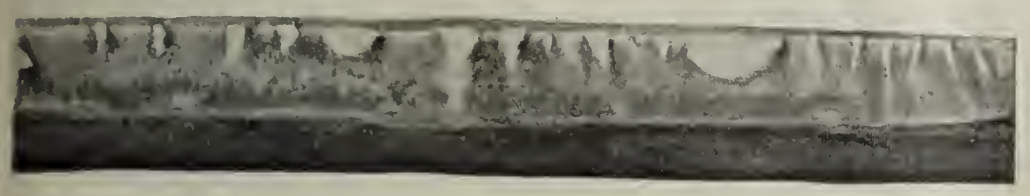
9.—*The Action of the Glaze on the Body.*

I assume, of course, that the glaze is dissolving the body all the time it is maturing. In the finished glaze there is a saturated

* I say nothing here about the glazes which crack during the earlier stages of the firing and then roll into beads, which may or may not subsequently flatten and flow so as to form a smooth glaze, because that subject was discussed by J. W. Mellor, A. Latimer, and A. D. Holdcroft, *Trans. Eng. Cer. Soc.*, 9, 126, 1909.

solution of body in glaze near the surface of the body, and the concentration of the solution decreases towards surface of glaze. It may be useful if I give a few examples illustrating the solvent action of the glaze on the body.

(1) The curious way some of the raw lead majolica glazes attack the edges of tiles when they have run so as to leave the edges with



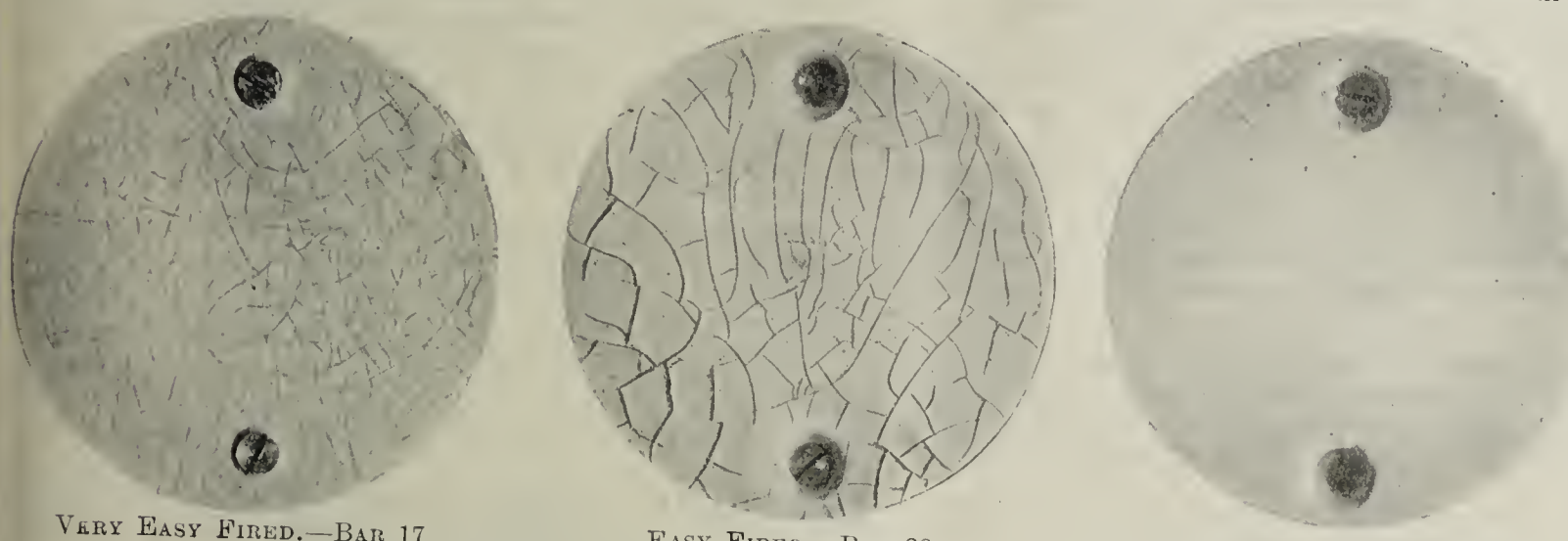
GLAZE RUN OVER EDGE OF TILE.

FIG. 4.—PHOTOGRAPH OF THE SERRATED EDGES OF A TILE PRODUCED BY THE SOLVENT ACTION OF GLAZE.

deep serrations, as illustrated on Fig. 4. The original of this photograph was given me by Mr. W. Burton.

(2) The marked effect of the composition of the body on certain colours—say, copper turquoise blue.

(3) It is inferred, too, that the dissolution of a certain amount of the body is necessary if the glaze is to be free from crazing or peeling. As is well known, easy-fired glazes are liable to craze. A more prolonged "soaking" of the ware in the glost oven will often cure the defect by giving the glaze time to dissolve enough body to bring the two into closer harmony. This is illustrated by the photographs, Fig. 5, of three "labels," all the same body and glaze. The glaze of the first is easy-fired (bar 17—1030°); the second a little harder fired (touched bar 22—1119°); and the third still harder fired (touched bar 3—1134°). The last has crazed only where the glaze is thick. The thicker glaze presumably required to dissolve more body than the thinner glaze in order that it might be in harmony with the body.



VERY EASY FIRED.—BAR 17. EASY FIRED.—BAR 22. PROPERLY FIRED.—BAR 23.

FIG. 5.—EFFECT OF "FIRING TEMPERATURE" ON THE CRAZING OF A GLAZE.

(4) Microsections through body and glaze at different stages of the firing have left no room for doubting this interpretation. If the glost firing be very prolonged, and the cooling be slow, the saturated solution of the body in the glaze often crystallises, and a fringe of crystals appears to grow from the surface of the body to the glaze, as illustrated by the photograph, Fig. 6—magnified about 40 diameters. If the firing be too prolonged the faults indicated above may be produced, and, in the extreme case, so much body is dissolved that the glaze is almost saturated, and, consequence, the surface has a harsh, "dry" appearance, as the glaze had been nearly all absorbed by the body. Fig. 7 shows a section made through a glaze, while studying the seumming of the on-glaze blue. The solvent action of the glaze on the body is well shown at the zone of contact of glaze and body.

(5) Glazes on those types of bodies which best resist attack by glazes are particularly prone to crazing. The difficulty in glazing vitreous bodies free from crazing is a well-known example. [The "low flint" content of a vitreous body is, of course, a determining factor; but the fact that the glaze on the harder fired vitreous bodies is very much more liable to crase than the glaze on the easier fired ware, is evidence that the phenomenon now under discussion is also an important factor.—July 10, 1913.] The explanation how easy-fired earthenware bodies craze more readily than hard-fired earthenware bodies is complicated by another phenomenon, which will be discussed on another occasion.



FIG. 6.—CRYSTALLISATION OF THE SATURATED SOLUTION OF A BODY IN THE GLAZE NEAR THE SURFACE OF THE BODY (x 40).

(6) If an air bleb be near the surface of the body, the glaze will often eat its way through the body into the hole, and the hot imprisoned air then escapes through the glaze and causes a bubble to burst at the surface rather late in the firing. As previously mentioned, it is then probable that the glaze will not then have time to heal the scar, and thus we have a second cause of *pinholed* glazes.

(7) If sodium carbonate be fused in a biscuit cup with a stained body, the sodium carbonate acquires an intense blue colour; while if fused in an unstained biscuit cup the soda carbonate has its own characteristic colour. Obviously, the sodium carbonate dissolves "cobalt" from the body. We can sometimes detect a similar colouration of highly alkaline glazes when fired upon stained bodies. Glazes containing baryta show the same phenomenon. Some of the millstone grits and sandstones in the neighbourhood are permeated with white veins of barytes. If the barytes be not rejected, but ground up with the sandstone for making "placing sand," curious *pale blue specks* may be produced where the particles of barytes come in contact with the ware in the biscuit oven. The origin of these specks has puzzled a good many potters.

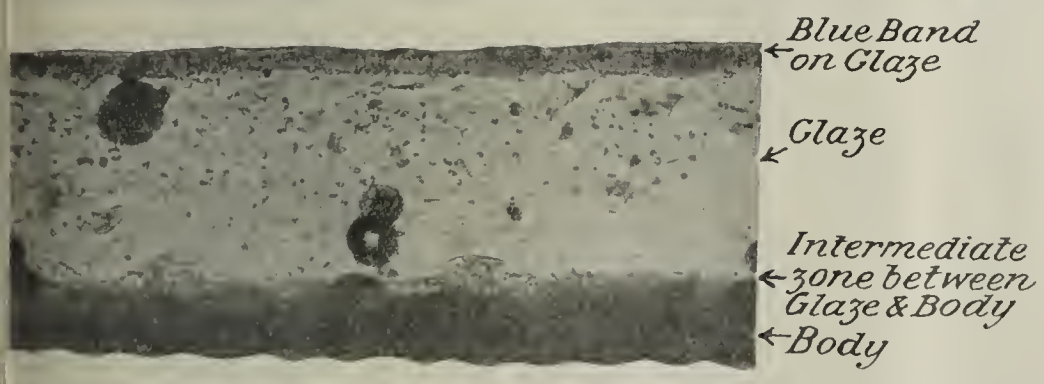


FIG. 7.—DIAGRAM SHOWING THE SOLVENT ACTION OF GLAZE ON BODY (x 150).

10.—*Is the character of the finished Glaze dependent upon the way it is compounded?*

If a given glaze mixture be fired under such conditions that the containing vessel is not attacked, and nothing is lost by volatilisation, it is perhaps mere tautology to say that the same result can be obtained, however the mixture be compounded, provided the ultimate composition be constant. The case is very different if similar glazes compounded in different ways be fired on ware so as to produce glazes to satisfy commercial requirements. This is exemplified by the care and judgment required in proportioning "frit" and "mill mixture" with a given glaze to get a result with the widest possible margin of safety.

Some years ago, Mr. A. D. Holdcroft made up a glaze in several different ways (ultimate composition constant), and all fired under the same conditions. The results obtained differed materially from one another. Some glazes appeared under-fired, some over fired, and some seemed perfectly matured. With some combinations the maturing is such that dulled glaze result; with other combinations the body is not attacked rapidly enough and crazing results;

with others, the glaze in the early stages of the firing forms a number of small patches of glazes, each of which rolls into an almost spherical head. The rolling of glazes is also produced by over-grinding of certain constituents. Signs of "rolling" are not uncommon with glazes containing too large a proportion of raw clay, and it can sometimes be cured by previously calcining part of the clay. These frits, made up with the "boric oxide" introduced as boric acid, borax, and as borocalcite would not have the same amount of boric oxide, owing to the known differences in the rates at which these materials lose boric oxide by volatilisation.

All these effects, and what I have said about volatilisation from the surface of glazes and the attack of the body by a glaze, show that the character of the finished glaze must be, and is, influenced by the way it is originally compounded. In a general way it can be said that leadless glazes are far more sensitive than lead glazes to the way the glaze is compounded; and fritted lead glazes in turn are more sensitive than glazes of the same ultimate composition built up with "raw lead." Consequently, *the way a glaze matures is determined not only by the way it is compounded, but also by the physical condition of its constituents; and by the character of the body on which it is fired.*

I am almost ashamed to emphasise these facts before our Society, because most of them are so very well known to observant potters. None the less, you will find the facts contradicted by eminent witnesses in the recent report of the Lead Commission.* It is difficult to understand how there can be differences of opinion on such a matter. The facts are verities which obtain independently of what any authority, however eminent, may think of them. It is well known that the keenest and most bitter controversies are waged about subjects which embody the least number of demonstrable facts—political and philosophical subjects, for instance. The facts in the present case are so numerous, and so easily verified, that I can see no reason for doubting the conclusion just italicised.

Addendum I.

In the introduction to H. H. Stephenson's *Ceramic Chemistry*, London, 1912,† the views which I have previously published on the incomplete nature of the reactions in the body during firing are apparently accepted; but with reference to glazes the author writes:—

> The chemical reaction between the constituents has proceeded to a finish, and the melt consists of a homogeneous mixture or solid solution of silicates;

and adds:

> The nature and condition of the raw materials are of importance in the body, while in the glaze they are irrelevant so long as the same ultimate composition is preserved.

These two quotations directly contradict the views which I believe are demonstrated in this paper. Unfortunately, Mr. Stephenson merely repeats assertions made in the Report of the Departmental Committee, previously cited, and no facts‡ are given in their support. I have here shown this view of glazes to be unsound in theory, and in conflict with practice.

Addendum II.—The Residual Contraction of Glazes.

It is generally considered that the crazing of glazes is due to differences in the coefficients of thermal expansion of glaze and body: otherwise expressed, crazing is produced by differences in the rates at which glaze and body contract on cooling. The attempts which have been made to establish this by measurements of the coefficients of thermal expansion have failed, probably because they take no account of the action of the glaze on the body when fired under normal conditions. Of course, other factors are involved, such as the elasticity and tenacity of the glaze. There is, however, a type of crazing which only develops after the ware has stood some time—may be years. Such glazes will pass satisfactorily all the regular tests for crazing. The phenomenon is quite common with glasses, which are, after all, closely related to glazes. If a freshly made thermometer be calibrated, the zero point afterwards gradually rises owing to the slow contraction of the cold glass. The Germans call this the *Nachwirkung* of the glass; the term is translated "after working" in the English edition of H. Hovestadt's *Jenaer Glas und seine Verwendung in Wissenschaft und Technik*, Jena, 1900. From our point of view, I think the term "residual contraction" better expresses the idea, for it is almost certain that this contraction is mainly responsible for the particular type of crazing now under discussion. The phenomenon has been carefully studied by the Berlin Standards Commission, and in the Jena Glass Laboratory. From the published results I infer that the best way to detect if a glaze is going to exhibit sufficient residual contraction to cause crazing, is to heat the ware for a long time at a temperature a little over 250° and then allow it to cool with extreme slowness.

Experiments made to find the relation between the magnitude of the residual contraction and chemical composition showed that the effect is greatest when potash and soda are in nearly equal proportions; that no material difference results by interchanging potash and soda when these constituents are in equal proportions; and the smallest residual contraction occurs when only one alkali—soda free from potash, or potash free from soda—is present. The lesson is obvious, although I have not yet attempted to verify these statements when applied to glazes.

In conclusion, I might say that I have had so many conversations with Mr. Bernard Moore on the subject of this paper that I am not very clear what ideas are his, and what my own. I have also had the immeasurable advantage of seeing the effects produced by a great many experiments by the students of the pottery classes extending over a number of years, and I have tried to infer what has happened from the numerous failures obtained. Curiously enough we learn most from trials which, judged by ordinary commercial standards, are dubbed failures. When anything proceeds just as we anticipate, there is very little more to be learned. Nature teaches most when she baulks our expectations.

* Mr. Thomason (*Trans. Eng. Cer. Soc.*, 11, 261, 362, 1913) does not hold the view that the behaviour of the glaze is independent of the way it is compounded, but claims that low-solubility frits and raw lead glazes show no appreciable difference in their behaviour in the glost oven. This latter statement can only be true under conditions where the tests are not sensitive enough to show a difference, because several differences in the behaviour of these two types of glazes are known.—July 10, 1913.

† This book was published after the MSS. of the paper had been placed with the printer, and this accounts for the subsequent interpolation of Addendum I.

‡ The statement on page 23 of Stephenson's book: "In glazes, the crazing tendency increases with the diameter of the flint," presumably refers to the flint of the body, since the sentence is a literal quotation from A. Heath, *Trans. Eng. Cer. Soc.*, 2, 45, 1902. If otherwise, page 23 would contradict the Introduction.

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.

MAXINE. 352,045. Window glass. Class 15. Maximum Light Window Glass Co., 28, Victoria-st., Westminster.

RADIOLITE. 352,265. Glass included in Class 15 used in connection with lighting apparatus. Falk, Stadelmann & Co., Ltd., 83, Farringdon-rd., E.C.

"ALBALUX." 350,952. All goods coming within Class 15. Siemens Brothers' Dynamo Works, Ltd., Caxton House, Tothill-st., Westminster, S.W.



352,020. All goods included in Class 15. No claim is made to the exclusive use of the letters "F. F. L." Koenig & Hammer, 11, Fore-st.-avenue, E.C.



350,473. China clay. Class 4. No claim is made to the exclusive use of the letter "S." Wm. Sharples & Co., 26, St. Peter-st., Blackburn.



351,124. English made earthenware articles included in Class 16. Clementson Bros., Ltd., "Phoenix" and "Bell" Works, Broad-st., Hanley, Stoke-on-Trent.

INFANTA, 352,058. **MAJESTIC,** 352,059. **OLYMPIC,** 352,060. **PETRINA,** 352,061. All Goods included in Class 16. Johnson Fireclay Co., Ltd., Excelsior Works, Cliffe Vale, Stoke-on-Trent.

LUMINEN. 351,370. Glass in rolled, plate, sheet, or other form. Class 15. Société Anonyme des Manufactures des Glaces et Produits Chimiques de Saint Gobain, Chauny et Cirey, 1 bis, Place des Saussaies, Paris, France. Address for service within the United Kingdom is, c/o G. Shaw & Co., 35, Temple-row, Birmingham.



352,186. Stoneware sanitary pipes and fittings. Class 16. H. R. Mansfield, Railway Works, Church Gresley, near Burton-on-Trent.

Legal.

Purchasing a China Business.—At Torrington (Devon) County Court on July 10, before Judge Lindley, Geo. Hoyle, Torrington, was sued by Miss F. R. Vincent for £34 14s. due in respect of the sale of a china business. Plaintiff's solicitor stated that his client sold the business at Torrington to the defendant in November, 1910, for £144 13s. 4d. He paid £25 down, and it was arranged that the balance should be paid by monthly instalments of not less than £4. In all the defendant had paid £109, leaving due the amount now sued for. The defendant failed to appear, and the Judge found for the plaintiff with costs.

His Lordship's China Bill.—At Peterborough County Court on July 8, before Judge Wheeler, Lord Huntly, Orton Hall, Peterborough, was sued by Mr. Chas. E. Gill, glass and china dealer, late of Market-place, Peterborough, for £14, due for china supplied and the hire of crockery. The Judge asked how it was that Lord Huntly owed the money, and plaintiff explained that his lordship had been a customer of his for several years, and the debt, which had been owing since 1910 and 1911, was chiefly for the hire of goods. The Judge : I will make an order for £5 a month, but I don't think you will get it.

China Merchant Sues ex-Coffee House Proprietor.—In Shoreditch County Court, early in July, before his Honour Judge Smyly, K.C., the Metwell Stone China Co., of 143, Kingsland-road, N.E., china and glass merchants, sought to enforce payment of a judgment debt of £4 0s. 9d. from Louis E. Marks, of 8, Manor-place, Hackney Downs. The plaintiff said the defendant was the proprietor of Sam's Coffee House, in Bishopsgate-street. Judge Smyly : That sounds rather extraordinary, as, if he is, he must be worth a great deal of money, as it is a very large place with a big rental. He writes to say that he has had the sack owing to a number of judgments having been served on him ; that does not sound like a lot of money. Can you prove that he is the proprietor of the place ? Plaintiff : He was there last week. Judge Smyly : Being there is no proof he is the proprietor ; he must have a very large capital to run such a shop ; he offers only 2s. a month. Plaintiff : He gave me the orders himself, and generally looks after the place. Mr. De Meza (for the plaintiffs) : He could pay this down if he liked. Judge Smyly adjourned the case for inquiries to be made. The hearing was resumed on July 21, when it was stated that the present proprietor of the business was Mr. Bryant, who paid the defendant £150 for it, whilst the lease of the premises was still in the name of Marks. The information came from Mr. Bryant himself. Judge Smyly made a 10-day committal order, suspended for seven days.

Director's Damages for Wrongful Dismissal.—On July 1 the hearing was concluded before Mr. Justice Bailhache and a special jury, in the King's Bench Division, of the action by Major Geoffrey Carr Glyn, of Sharnbrook, Beds., against Holophane, Ltd., for damages for alleged wrongful dismissal by the company from the position of managing director of the company. The defendants alleged that, owing to misconduct by the plaintiff, they were justified in dismissing him, their allegation being that he placed a number of "Dilux" glass light shades into their "Holophane" stock, and sold them as "Holophane" shades. It appeared from the evidence that the Holophane Co. bought out a competitive German firm, who sold a shade called "Dilux," which was practically similar to the "Holophane" shade, though inferior in quality, and the suggestion was that the plaintiff, in his position of managing director of the company, ordered that stock of "Dilux" to be mixed with the "Holophane" stock, and sold as "Holophane." Plaintiff emphatically denied that the "Dilux" ware sold as "Holophane" was inferior, and alleged that all he did was done with the full knowledge of the board. The jury found for the plaintiff without leaving the box, awarding him damages amounting to £400, equivalent to six months' notice to terminate his agreement. His Lordship also decided in the plaintiff's favour the point of law on the question whether the board had power to revoke the plaintiff's agreement of service, having regard to the articles of the company's association. Judgment was entered for the plaintiff, with costs.

Pottery Paintress's Compensation.—(From our Potteries Correspondent.)—A compensation case of unusual character came before Judge Ruegg, K.C., at the Burslem County Court on July 3, when Keeling & Co., earthenware manufacturers, of Burslem, applied for a review of the compensation which was then being paid to Ellen Elizabeth Hulme, married woman, of 27, Elm-street, Burslem, formerly in the employ of the applicants. It was stated on behalf of the applicants that the woman, who was an enamel paintress, had suffered from eczema, resulting from the fumes of the turpentine used in her work. The two doctors called on behalf of the employers agreed that the woman had now recovered, but they both admitted that the disease was likely to recur if she returned to the same work. She had been receiving compensation at the rate of 7s. per week. For the respondent, the woman's medical attendant said he had sent her back to work on three occasions, but each time there was a recurrence of the disease within one or two days of her return, and each attack rendered the power of resistance less. Dr. F. Shufflebotham, of Newcastle-under-Lyme, called for the respondent, said the woman was incapacitated from work as far as her late employment was concerned. It was certain the disease would recur if she returned to the same work. Each attack pre-disposed to a quicker and more serious attack, and the power of resistance was progressively lessened with each subsequent attack. Witness had seen six or eight similar cases this year. The Judge consulted with the solicitors in the case, and as a result, there was an award by consent for £60 and costs in favour of the respondent.

The Gaza Pottery Industry.—Pottery is the chief industry of Gaza, and its products are exported in large quantities at good prices. The value of the export was £2,000 in 1912 as against £1,500 in 1911, and £2,000 in 1910.

Belgian Foreign Trade in Porcelain.—According to the import statistics, Belgium continues to be a good market for porcelain, the volume of trade being fairly constant and considerably in excess of the exports. The total imports in 1910 amounted to the value of 2,441,818f. ; in 1911 to 2,011,394f., and in 1912 to 2,299,620f. The largest proportion is supplied by Germany, which furnished 1,599,950f. worth in 1912 (1,413,830f. in 1911) ; next in order being France, with 407,454f. (353,344f.), followed by Great Britain with 93,183f. (99,112f.), and the Netherlands with 93,289f. (59,326f.), Japan with 39,368f. (27,345f.), Austria-Hungary with 23,640f. (26,007f.), and China with 23,569f. (7,582f.). The exports are relatively insignificant, and are declining in importance, having been 271,477f. in 1910, 152,904f. in 1911, and only 141,778f. in 1912. France is the largest customer, taking goods to the value of 66,759f. (40,618f. in 1911), Germany coming next with 22,922f. (24,396f.), and the Netherlands with 22,077f. (11,993f.), followed by Great Britain with 11,841f. (15,984f.)

THE MURANO GLASS INDUSTRY.

(SPECIALLY CONTRIBUTED.)

IN Europe, after the fall of the Roman Empire, the glass industry was neglected until a revival set in in Venice. Ordinary glass articles were being manufactured in Venice in 1291, and the Great Council of the Venetian Republic, fearing the danger of fire, ordered that glass manufactures should only be carried on outside Venice, on one of the islands of the Lagoon. Murano was chosen as the centre of the Venetian glass industry, and on this island the large glass factory was built. Marco Polo brought with him from the Orient all kinds of wonderfully coloured gems, and the glass workers imitated them in glass paste with great success, under the mastership of Cristoforo Briani and his pupil Domenico Miotto.

The art of manufacturing glass gems was a branch of the great Murano glass works, and went under the name of Arte del Margaritaio. The workers excelled in the art of imitating opals, agates, chalcedony, jasper, porphyry, serpentine and granite ; the last three named varieties being used for the making of pavements and the decoration of walls. So widespread became the fame of these workers that there was a demand for their articles in Egypt, Abyssinia, Turkey, India and China. Glass vases, however, in this period seem to have been imported into Venice from Byzantium.

In the fifteenth century the Venetians became possessed of the secret of glass colouring and painting, the knowledge of which was brought to them from glass workers who were taking refuge in Venice, having escaped from the Turkish invasion of Constantinople.

In the sixteenth century the progress of the Murano glass workers was so great that it called the attention of the world to their workshops and the Oriental glass wares were no longer in demand, the Venetian patterns being the models which other nations tried to copy and rival. The Murano workers began to decorate the ordinary colourless glass with the filaments of colour with most charming and new effect, and this invention enhanced still further the beauty of the elegant shapes of the light, thin, wonderful glass which made the Murano glass industry immortal.



Photo. by Argus, Milan.

A VENETIAN GLASS ELECTROLIER.

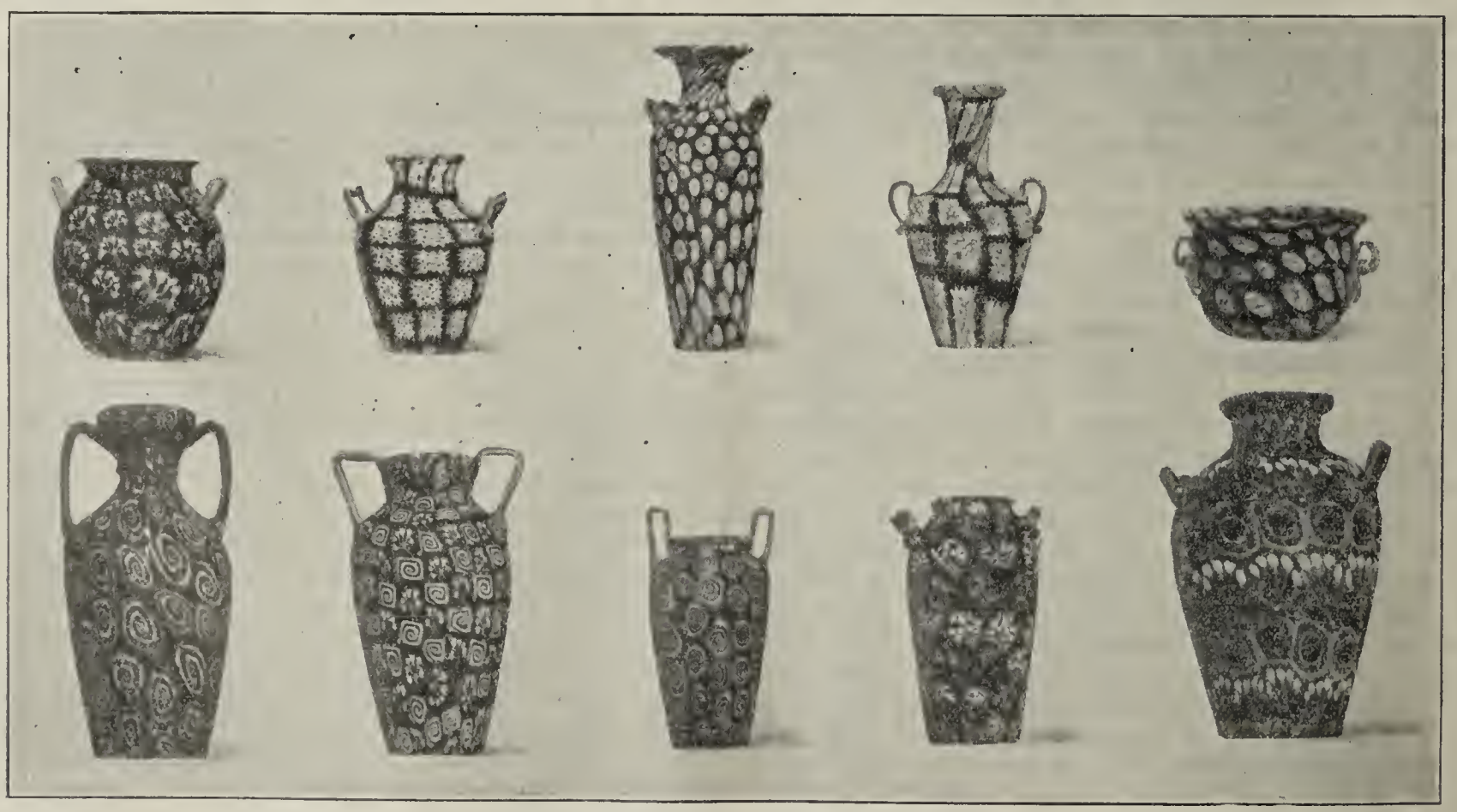


Photo. by Argus, Milan.

A SELECTION OF MOSAIC GLASS VASES.



[*Photo. by "The Pottery Gazette."*

GRAND CANAL, MURANO.

The discovery of filigree glass enhanced still further the splendour of the finished article, and the Murano glass work was prized accordingly, and the price and value of the article grew. At the time it had no rival, and the Head of the Council of Ten, who superintended the glass factories, fearing foreign competition, and seeing in it a danger to the welfare of Murano glass workers, gave an order forbidding the workmen of Murano to export the materials they worked in, such as alum and sand, or to carry on the industry abroad under penalty of imprisonment for their families who remained in Venice and threats of death for them if they were caught.

In compensation, the glass workers were granted a great many privileges, and Murano had a special legislation and administration; the Venetian Republic favouring the glass workers in every possible way. They became famous and rich, and in 1573 Henri III., visiting Venice, was so struck by the artistic beauty of their ware that he raised the masters of Murano glass work to the rank of nobles, conferring French titles upon them in recognition of their merit. In the Golden Book of the Island the names of these ancient and honoured glass workers are inscribed :—Muro, Seguso, Motta, Bigaglia, Miotto, Briani, Gazzabin, Vistosi, Ballarin.

The glassware of the fifteenth and sixteenth centuries, which made Murano famous, was divided into various classes, each having typical characteristics of its own :—(1) White transparent glass vases; (2) coloured glass vases; (3) enamelled and gilt vases; (4) coloured filament vases; (5) filigree vases known under the special local names of Vasi a Ritorti and Vasi a Reticelli; (6) mosaic vases.

In some of the white transparent glassware vases lines of coloured glass were applied exteriorly, after the Byzantine style, in others sparks or particles of gold were mixed in the glass paste by a process which has been lost and remains unknown. The greatest master of coloured glass in the fifteenth century was Angelo Beroviero. The enamelled and gilt vases were not typically Venetian, the workers copied them from Byzantine specimens. The coloured filament glasses were most complicated and were made out of thirty to forty canes of variously prepared glass. Mosaic vases were also called Fioriti and Millefiori (a thousand flowers); their patterns were of infinite variety, symmetrical, starlike. They were formed by arranging side by side sections of glass cane which were made in different coloured rods of glass, and bound together by heat. Besides these wares, "Cameo glass" was made at Murano by covering a mass of molten glass with one or more coatings of a different coloured glass.



[*Photo. by "The Pottery Gazette."*

LANDING STAGE AND GLASS WORKS AT MURANO.

Mirrors in glass are known to have been made as far back as the year 1311 A.D., but they were not in common use, and even in the sixteenth century mirrors of steel were still in vogue; but in the sixteenth and seventeenth centuries the Murano workshops turned out great quantities of glass mirrors which they exported. Then France and England became skilled in this art, and in 1772 only one glass house at Murano made mirrors. In the fifteenth century the first crystals were made in



[*Photo. by "The Pottery Gazette."*

PART OF MURANO, NEAR ELECTRIC LIGHTING STATION.

Murano, and in the seventeenth century iridescent glass was invented and aventurina and beads were manufactured wholesale.

When the art of Venetian glass makers declined, they went in for extravagant unsuitable shapes, such as drinking glasses made in the shape of ships, lions, birds, whales, &c., and fine art was defiled. The death-blow was given in the beginning of the eighteenth century, when Bohemian glass was at its best and competed with Murano glass, to the latter's detriment; the Venetian workers were beaten in their art, and they ceased to make elaborate pieces of exquisite filigree in fantastical patterns, for which there was no demand, and they kept to the more common glass articles in ordinary shapes and colours, for which there was a sale.

When the ancient art was revived (1816-1890) a new era began for Murano glassware; many of the old processes were re-discovered, all the old marvellous colours were made; and now in the Murano factories rose patterns, flowers, wonderful mythological beings, quaint figures of all kinds, candelabra, wrought in patterns of flowers carried out in their natural colours, table centres, vases, cups, glasses, all rivalling each other in splendour. The blending of the blues, the greens, the reds, the violets are typically Venetian, and a gift the glass workers have had handed down to them from the originators—their ancestors.

Earthenware and China are being imported in increasing quantities into Egypt. British exporters should keep a close watch upon this growing market.

China and Glass to the value of £2,300 was imported into Mosul, Turkey, last year. The value of the import in 1911 was also £2,300, but in 1910 it was only £1,800.

Packing Porcelain for America.—The German Consul in St. Louis, on the advice of a firm of importers, recommends shippers of porcelain or earthenware tableware to the United States to pack their goods in casks instead of in cases. This is already done by French shippers, and it is found that the goods usually arrive in better condition, breakages being rare.

POTTERY MANUFACTURE IN NORTHERN NIGERIA.

THE pagan tribes of Nigeria, mainly of pure negro stock, are among the most advanced of any in the Western Sudan. In many respects the pagan negroes of the Niger-Benue district excel their Mohammedan neighbours, as in the construction of their huts and in agricultural pursuits; while their industrial arts have also reached a higher stage of development. This is a phenomenon worth noting, since Islam is credited with the power of always elevating the pagan peoples brought under their sway. The fact that the natives of Northern Nigeria possess technical and artistic ability of no mean order is shown in an article by Dr. Scott Macfie on "The Pottery Industry of Ilorin," contributed to a recent number of the "Bulletin of the Imperial Institute."



Fig. 1 (Red Pottery).—A potter's compound. Women making large water-pots, and preparing clay.



Fig. 2 (Red Pottery).—Firing the pots.

Two main varieties of pottery are made at Ilorin: "red," the commonest kind, and "black," as distinguished by Dr. Macfie. The industry is conducted exclusively by women, who are invariably Yoruba, living in the north-west district of the town; the processes are secret and handed down from parent to child; and the makers of red pottery and the makers of black pottery are each ignorant of the processes employed by the other. There is also a third variety of pottery, occasionally met with in Ilorin, which Dr. Macfie refers to as "painted." This comprises ornamental vessels, often of elaborate designs, decorated with the figures of birds or animals, and painted in gaudy colours, which are the work of a single potter, a Hausa man. The red and black vessels are also decorated, but in the simplest manner; the materials used are, in both cases, practically the same, and the difference in colour is due mainly to variation in the method of firing.

Native pottery is preferred locally to European substitutes, being cheaper and better adapted to their



Fig. 3 (Red Pottery).—A corner of a potter's compound.

special uses, such as water-pots at the wells, small horse-shoe grates for cooking, and moulds for agidi (a native food). All the larger vessels—such as the great jars in which water is stored, pots for brewing native beer and melting shea butter—are of local manufacture, as well as the domestic utensils in common use.



Fig. 4 (Black Pottery).—Pots laid out for sale, and others, not yet burnt, inverted and drying in the sunshine.

The chief centre of the "painted" pottery appears to be at Kura, near Kano. The examples manufactured by the Hausa potter at Ilorin included a highly ornamental native lamp, which, Dr. Macfie points out, offers an interesting parallel to some Greek vases identified by Professor Bosanquet and others as kernoi. The Greek kernos was "a clay vessel, to which were attached a number of small cups containing various grains and liquids offered as first-fruits of the harvest, especially in the Eleusinian worship."



Fig. 5 (Black Pottery).—Firing the pots.

Dr. Macfie's article is illustrated by thirteen half-tone pictures showing the potters at work and specimens of their wares. By courtesy of Mr. John Murray, publisher of the "Bulletin," we are able to reproduce half-a-dozen typical photographs.

The Bunzlau Technical School of Ceramics.—The report of this school for 1912 bears renewed testimony to the value of the establishment, under the excellent management of Dr. Pukall, as an educational institution for future ceramists. No difficulty was experienced in procuring appointments for students who had passed their examinations, and in the majority of instances their capacity was quickly appreciated by employers. Those trained in technical drawing were in special request, and, in fact, the demand greatly exceeded the supply. Regret is expressed in the report that the ceramic industry does not appear to take the same keen interest as formerly in its technical schools. Students of maturer years, and those already possessing some knowledge of the industry, appear to have been more successful, and to have obtained appointments more readily, than their younger colleagues who entered the school at 14 and without any previous practical experience.

FASHIONS IN HOLLOW GLASSWARE.

(SPECIALLY TRANSLATED.)

DURING the past twenty years two factors have exercised a very considerable influence on German industry as a whole, and the hollow glass industry in particular, namely, the "new tendency," which set in during the nineties, and the high protective duties imposed at the beginning of the present century. At first, says "Bruhn's Fachblatt," the effect of the new tendency on the hollow glass industry was confined to the production of good medium and high-class articles, but it has gradually extended to all grades. Whereas formerly the manufacturers did not trouble themselves greatly about new patterns, the public holding to the accustomed good articles, and being grateful for the few novelties offered, there began a period of bustle and competition in the production of novelties, both in shape and decoration. In these endeavours to beat competitors the aid of artists of repute was invoked, and certain of these latter have made a considerable reputation. Many successful shapes have been introduced, and in the case of domestic articles enjoy the permanent support of the public, the requirements of practical use having been sufficiently considered. This condition, of course, imposes definite limits, but the decoration of glassware was dislodged from its accustomed ruts, with the result that the public soon grew satiated with all the possibilities and impossibilities introduced into the modern style of painting and has now almost lost all taste for them. For this reason the enamel painting formerly so high in favour is now almost discarded in good class ware, all that is still met with being delicate decoration in the modern style, and in transparent colours.

Cut glass has not been affected by these serious changes in taste, perfect beauty having been already attained; and the principal modifications have been in the direction of improving the quality of the glass and increasing the polish. It is true that the older complex patterns are now



Fig. 6 (Black Pottery).—Typical examples of the ware.

in less favour than quicter designs with very deep cutting ; but it cannot be said that the one has displaced the other. Of late glasses decorated with flower designs in a variety of forms approximating to the modern style have been introduced, and seem to be in favour ; but these are probably more suitable to English tastes, and one cannot yet decide whether they have come to stay On the other hand, certain styles of cut decoration have quite gone out of fashion, owing to the numerous imitations that have been brought out in pressed glass. Engraving is now coming to the front again for goblets and small articles, the designs being subjects from the animal and vegetable kingdoms, and very tasteful.

Parliamentary Notes.

(FROM OUR OWN CORRESPONDENT.)

Weight-Carrying in Potteries.—In the House of Commons on July 14, Lord H. Cavendish-Bentinck asked the Home Secretary whether his attention had been drawn to the fact that the report of H.M. Chief Inspector of Factories in 1912 shows that the carrying of grossly excessive weights is widespread and of frequent occurrence ; that women and girls employed in earthenware and china works commonly carry weights of 80 lbs., and often weights of 100 lbs. ; and whether, in view of the injury resulting to workers from this cause, he proposes to introduce legislation to deal with this matter on the lines recommended by the Accidents Committee. Mr. McKenna said he had seen the passages referred to, but he did not think they were quite accurately summarised in the question. The only direct statutory powers at present possessed by the Department were limited to the case of children under fourteen. By the Employment of Children Bill, now before the House, it was proposed to extend them to persons up to the age of sixteen. The Department was fully alive to the importance of the question, and was taking such action as is possible. In the case of the pottery trade the matter had already been dealt with in the new Regulations, and it had been put forward as one of the subjects for discussion at the series of conferences with employers and employed in different trades which were being held in accordance with the recommendation of the Accidents Committee. It would be seen from the published report of the conferences already held that considerable progress had been made in the desired direction. Instructions had also been issued to the certifying surgeons to have regard to the question when examining young persons for employment. The subject is noted for consideration in connection with the next amending Factory Bill, but he could not say at present when it would be possible to take that up.

China Clay to the weight of just over 43,030 metric tons was exported from Austria-Hungary during the first three months of the current year. The total shows a moderate increase.

Glass Wanted in Chicago.—H.M. Consul-General at Chicago reports that a firm of electrical manufacturers in that city wishes to get into touch with United Kingdom manufacturers of lead glass. Prices should be quoted, if possible, f.o.b. New York city. The name and address of the above inquirer may be obtained by United Kingdom manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., mentioning THE POTTERY GAZETTE.

Reviews.

Thorpe's Dictionary of Applied Chemistry. Vol. IV. From "Oilstone" to "Soda Nitre." Price 45s. net. London : Longmans, Green & Co. 1913.

THE penultimate volume of this valuable dictionary contains one section which is of special interest to our readers, that on "Pottery and Porcelain," which is dealt with very capably by Mr. William Burton, M.A. The industry has made considerable progress since the publication of the previous edition of the Dictionary, but owing to Mr. Burton's prescience very little revision of the original article has been necessary. In the two dozen pages at the author's disposal a very concise account of the technical side of this highly scientific industry is tersely given. The writer's qualifications render of special interest his account of the crystalline and lustre glazes. With regard to the former he says : "One of the common defects of glazes, the separation of certain compounds on cooling, has of recent years been cultivated so as to produce effects of rare beauty. Glazes rich in zinc oxide are apt to develop crystals of willemite (zinc silicate) on cooling, and at Copenhagen, Sèvres and Berlin the preparation of such glazes has been raised almost to a fine art. Other glazes yield beautiful small crystals of various micas, and of this kind the 'Aventurine' glazes of Pilkington's, introduced by Joseph Burton, are highly esteemed." Other points to be noted in this comprehensive article are the illustrated descriptions of various types of ovens, the useful tables of compositions for bodies and glazes, and the up-to-date reference to collodial action in relation to the ceramic industry.

Industrial Poisoning. By Dr. J. Rambousek. Translated and edited by Dr. Thomas M. Legge. London : Edward Arnold, 1913. Price 12s. 6d. net.

DR. RAMBOUSEK, of Prague, is a well-known Professor of Factory Hygiene and Chief State Health Officer, while our readers do not need to be reminded that Dr. Legge holds the position of His Majesty's Medical Inspector of Factories. These two gentlemen are eminently in a position to produce an exhaustive work on the subject indicated by the title. The book, however, appears far from complete to an English reader, bearing frequent evidence of its Continental origin and being too narrowly Teutonic in its point of view. This is particularly noticeable in the case of the section dealing with the ceramic industry, where most of the facts are derived from Kaup and relate solely to the porcelain industry on the Continent. As a particularly glaring instance may be quoted the statement that "porcelain receives a leadless glaze of difficultly fusible silicate : . . . risk is here confined to painting with lead fluxes containing lead." This, our readers will note, refers to hard paste porcelains, and takes no note of the great section of the porcelain industry which relies almost entirely upon glazes containing lead. The general impression gathered is that very few industries indeed are unaccompanied by risk of some kind of poisoning, that the poisoning most prevalent is due to inhalation of noxious fumes or dust with skin absorption as a very feasible secondary cause, and that practically all these forms of poisoning are preventable by the proper observance of ventilation and cleanliness, and the wearing, when necessary, of one or another of the useful protective apparatus now available.

THE FACTORY ACTS IN 1912.

(SPECIALLY ABSTRACTED.)

THE annual report for 1912 of the Chief Inspector of Factories and Workshops has just been issued, and we take the earliest opportunity of printing below, at greater or lesser length, some of the important references contained therein to the potting and glass trades, many of which are of exceptional interest.

NEW POTTERY REGULATIONS.—In his general report to the Secretary of State for the Home Department, Sir Arthur Whitelegge observes :—

"With regard to the manufacture and decoration of pottery, the proposals of the Departmental Committee, issued as Draft Regulations in 1911, met with many objections from both parties, and although by protracted discussion these were reduced to small compass, a public inquiry became necessary. This was held at Stoke on Nov. 25 to 27 by Judge Ruegg, K.C., and on his Report Regulations were made on Jan. 2, 1913. These are now in force. They embody several novel provisions, e.g., as to systematic inspection and reports by persons appointed for the purpose, sectional placards for each work-room setting forth the regulations applicable to that room, control of weight-carrying by women and young persons, limitation of hours, initial certificates of 'permission to work' in certain branches for which periodical medical examination is not required, and precise standards of mess-room accommodation. The necessary forms have been issued to occupiers, with an explanatory circular."

The Chief Inspector goes on to refer to the entailment of considerable structural alterations, and to the exhibition of appliances organised by the Joint Committee of Pottery Manufacturers of Great Britain, which has been held since the report under review was penned, and an account of which it will be remembered was given with some fulness in the last issue of THE POTTERY GAZETTE.

GLASS WORKS AND "MALE YOUNG PERSONS."—The Chief Inspector proceeds to refer to the report presented in November last by the Departmental Committee appointed in 1911 to consider the night employment of male young persons in factories and workshops. We have from time to time thought it necessary to give some space in this journal to the trend of modern official thought as it particularly affects the glass industry, and were consequently looking out with some interest to the Chief Inspector's statement in his annual report. It is possibly advisable to print the paragraph "in extenso." The Departmental Committee

"advise the discontinuance of the special exceptions now allowed for blast furnaces and letterpress printing works (by s. 54, for boys over 14), and for sugar factories, mineral dressing floors in Cornwall, or concentration works, cordite and gun-cotton factories, continuous wire drawing, and artificial silk factories (by Orders, under s. 54^4, for boys over 16); and the same, but subject to substitution of other latitude for which the present Acts do not provide, as regards the exceptions for newspaper printing (s. 56 for boys over 16), electrical stations and china clay works (Orders under s. 54^4, for boys over 16), but retention of those for iron mills and continuous processes in paper mills (s. 54), and glass works (s. 55), subject to the age being raised from 14 to 16 years (or, until 1916, as regards glass works only, to 15 years). The present special exceptions for reverberatory and regenerative furnaces and the galvanising of sheet metal and wire (allowed by Order under s. 54, for boys over 16) are also to remain. The Committee further recommend two other conditions to be attached to all night employment of young persons; periodical medical examination, and a certificate from the District Inspector that the arrangements for compliance with the requirements are satisfactory.

"So far as the recommendations hinge upon Orders, the necessary steps have been taken to give effect to them, but alteration of the special exceptions allowed by statute can only be made by further legislation."

It will certainly be interesting to watch closely the developments that will take place between the present and 1915 in regard to the government of the night labour of "male young persons" engaged in glass works.

THE RESPONSIBILITIES OF THE EMPLOYER.—In the course of a further reference to the exhibition of appliances for carrying out the new pottery regulations, the Chief Inspector is pleased to look upon this as "an important precedent which deserves wide imitation in other centres with regard to other industries." He further goes on to observe somewhat significantly that

"The Acts and Orders impose many duties upon occupiers, and it has repeatedly been pointed out, by circulars and otherwise, that this responsibility is in no way contingent upon warning from the Inspectors. It requires, inevitably, close and sustained supervision on the part of the occupier, and this has now been formulated for certain branches of industry: for potteries, under the new Regulations, and for woollen and worsted mills as part of the 'agreement' reached in the recent Conference. The scheme covers matters of daily and hourly observance which cannot be safeguarded by occasional visits of Inspectors, however frequent, and is in harmony with the long-established requirement of sending notice and keeping record of sundry occurrences in the works."

The Chief Inspector, in the course of his comprehensive but concise review of the sectional reports of the various inspectors, only certain of which we are intimately interested in just here, calls special attention to Mr. J. H. Walmsley's history of the negotiations that have taken place in regard to the potting trade since the Draft Regulations were issued in 1911, and which led up to the public inquiry by his Honour Judge Ruegg, K.C., in November last, since which date the code has been finally agreed upon, and came into force on Jan. 2, 1913. Mr. Walmsley reviews the progress that has been made during the nineteen years since the first code of rules was established, and indicates the steps being taken to meet the new requirements. The Chief Inspector presupposes the amount of work which doubtless lies in front of the inspectors in securing structural alterations and better forms of exhaust ventilation, for, although the existing ventilation was probably the best of its kind at the time of its installation, some of it has, in the official eye, become obsolete, and will probably have to be replaced by more modern appliances.

THE SOUTH WESTERN POTTERIES.—The same division reports in regard to earthenware and china that "the existing rules are said to be generally well observed, but considerable alterations will be required under the new regulations. These will now be put in hand."

PRECAUTIONS IN SAND BLASTING.—Mr. J. H. Walmsley, H.M. Superintending Inspector of Factories for the Midland Division, makes a very pertinent observation in regard to sand blasting, which reads as follows :—

"Sand blasting.—Mr. Garvie (Wolverhampton) remarks that supervision in the factory by responsible persons is much neglected, the helmets and respirators are not kept clean, the pendant curtains of sand-blasting machines are not kept in good repair. In the sand blasting of glass, an occupier said the operative would not wear the respirator provided; it was produced

and found to be an old dirty thing supplied to a previous worker.''

Inspector's Review of Pottery Trade.—The Superintending Inspector's report under the heading of Pottery is exceptionally interesting. In it he reviews briefly the progress of legislation during the last nineteen years, and a hopeful vein is observable in the preface. He points out that the rules formulated in 1894, the result of the deliberations of the Committee of Inquiry appointed in 1893, were very moderate, and dealt with two important factors—dust and lead. At that time very few employers seemed to realise the extent of the injury to the operatives; ''potters' rot'' was known to exist, but not until 1896 was the heavy incidence of lead poisoning fully realised. The introduction of fans for removing lead dust brought about an effective change, which was specially noticeable in the case of groundlayers, amongst whom the cases practically ceased. The old rules of 1901-3 formed a foundation for the comprehensive regulations of 1913. That the occupiers realise the importance of hearty compliance is, he thinks, illustrated by the action already taken to comply with the structural conditions. He goes on to point out that

> ''The object to be aimed at by all concerned is to 'stop the dust,' for on this depends the solution of the pottery trouble. In the Stoke district the lead cases for the past ten years are nearly on the same level except for 1909, when trade was very slack, and the maximum benefits derivable from the 1901-3 Rules seem to have been reached. In the years 1906-1912 the cases were fairly evenly distributed among haf of the pot-banks (with the exception of three firms), the other half being immune. The three firms have large factories and employ many lead workers, and it is satisfactory to note that recently the cases have decreased in number. It should be remembered that it is possible for a firm to be credited with a lead case, though the mischief may have been done at another pottery. Cases might be quoted where the affected person had only worked two or three months at the pottery from which he was suspended. From about 50 potteries where the conditions are far from satisfactory only six cases have been reported during the past five years. Already many improvements have been carried out, such as tiled walls in dipping houses, impervious floors, good flushing arrangements, improved ventilation and lighting, new glost placing shops, and improved ware cleaning benches. Many of the old unsuitable workrooms have been replaced by well-designed and well-lighted rooms, in which supervision, so vitally necessary in potteries, is greatly facilitated.''

Exhaust Ventilation.—Under the above heading the Superintending Inspector points out that much work may be necessary in order to make the rough and ready constructions which were made when the methods of application were but moderately understood thoroughly efficient. It is pleasing to observe, however, that after criticising certain installations, and indicating causes of failure, he goes on to report:—

> ''The conditions of the China scouring shops are excellent compared with those I met with 20 years ago, where there was fine flint dust everywhere, and on everything, and where some of the shops were wretched places to work in. In two china factories exhaust draught has been provided at the biscuit placers' benches, and the lighter flint dust is drawn away from the workers. Indirectly this has been the cause of improved conditions in these shops, for in time past the gas burners became choked with dust, and the light in the shops, after dark, was miserably poor, whereas now, owing to the clearness of the air, it is possible to instal systems of gas lighting with incandescent mantles. Exhaust has been provided in three tile-pressing shops. The improvement is evident on looking at the hair, faces, and clothing of the workers. Other installations are in progress. Flat-knocking in the china trade has hitherto been done almost entirely by hand, although I remember several earnest attempts to do it mechanically. The indifference of the men was really the cause of the non-success. Two plants are now in existence where the flat ware is ''knocked'' by mechanical means, and the dust removed by an exhaust draught. In one pottery a plant has been installed by means of which china biscuit ware can be removed from the sagger near an aperture in an air trunk leading to a fan; the flat ware can be knocked by a mechanical process in a box connected with the same fan, and the powdered flint sifted in a compartment which is also connected to the exhaust draught, the clean flint descending through a shoot to the placing bench.''

Dipping.—''Under the new Regulations,'' says Mr. Walmsley, ''there are many requirements which will materially alter the conditions in the dipping houses.'' He refers to the necessity for care on the part of the operatives, and affirms that much lead poisoning has undoubtedly arisen in the past from want of care and thought on the part of the dipper. Temperature is, he suggests, an important matter, high temperatures apparently rendering the workers more susceptible to lead poisoning. In one pottery an ingenious device has, he reports, been put into operation by means of which the risks in this process are minimised. After the glaze is ground it is pumped to an upper floor into a stock tub, where it is agitated, and then flows down a pipe into the dipping house where, by means of a flexible pipe, it is conveyed into the dipping tubs ready for use.

Ware Cleaning.—In the opinion of the Inspector there are too many unnecessary cases of lead poisoning in the cleaning of glazed ware, and even where fans are provided, the value of the exhaust draught is often nullified by careless handling of the ware by the operative.

Other Observations.—The report goes on to deal with glost placing, colour blowing, lavatories and mess rooms, temperature, overalls, and head coverings, ventilation of drying stoves, cleaning of work places, dipping house boards, dipping machines, trolleys in dipping houses, and lastly, tunnel ovens. In the process of glost placing, the Inspector considers that there is not much chance of introducing special protection, but a reasonable amount of care in the cleaning of ware would, in his opinion, prevent much of the danger. He reports marked improvement in lavatory accommodation, though it is still far from adequate. He foresees that the new regulations may probably be difficult to comply with at first in many of the smaller factories where every available room is required for productive purposes. In regard to temperature, especially in the matter of oven drawing, the whole industry will now be controlled by one standard. It is important, he says, to know that mechanical cooling is possible, and that a reasonable limit can be reached in a reasonable time. In the matter of ventilation of drying stoves, he considers that old prejudices are disappearing, and serious attempts are being made to bring potteries and processes up to date. Great thoroughness is recommended in the cleaning of workplaces. In their application to the washing of dipping house boards the Regulations should, he considers, be extremely helpful. Finally the report refers in a complimentary manner to several new appliances which will result in a minimum handling of the unfinished wares, and consequently less risk of danger to the operative.

Leadless Glazes.—In the Stoke district the use of leadless glaze has made little progress. Several firms after giving an undertaking to use leadless glaze have had to withdraw the application after giving the glaze a fair trial. Low solubility glazes make but slow progress. Mr. Pendock (Derby) reports the increased use of leadless glaze, but mostly for stoneware filters, jam jars, and foot warmers. Other firms are also making experiments in the same direction."

Sand Blasting of Glass.—In contradistinction to the report of the Midland Division already referred to, the Superintending Inspector for the North-Western Division observes that the reports from Manchester and Liverpool, to which districts the process of sand-blasting is confined in his particular division, show that in all the factories precautions are taken to prevent the escape of dust; respirators or other suitable protections are provided, and in some cases the length of time for which any one person is allowed to work at the process is limited.

Lead Poisoning.—As usual, lead poisoning unfortunately calls for a good deal of attention, both in the reports of the Lady Inspectors and that of the Medical Inspector. Thirty-nine cases were certified altogether amongst females engaged in the earthenware and china industries, and of these one was fatal and four classed as severe. Thirty cases were reported from the remaining industries, so that more than half of the total cases reported amongst females occur in the pottery trades. There were 32 cases in North Staffordshire, 18 of which arose in earthenware processes, five each in china and tile processes, three in electrical fittings, and one in sanitary ware. The different processes concerned in these cases are represented as follows:—Ware cleaners, 10; aerographers, 8; dippers' assistants, 7; majolica, 4; groundlayer, 1; glost placer, 1.

Miss Lovibond, who personally investigated most of the cases, reports:—

"The 32 cases were distributed over 32 factories, no two cases occurring in one factory, although in one firm owning more than one factory, three cases occurred. The principal feature common to the factories of this firm, is the 'speeding up' in the dipping houses and the high pressure at which work is done. The one fatal case occurred at a works where in the past four years there have been four cases. It is satisfactory that this small branch of a large works has been closed entirely, the workers being transferred to large airy rooms, where the accommodation is in every way more suitable. Twenty-five cases occurred among married women. More than half the workers were under 30 years of age the age distribution was as follows:—15-20 years, 5; 20-25 years, 7; 25-30 years, 6; 30-35 years, 6; 35-40 years, 3; 40-60 years, 6. Of the 10 cases where warecleaning was carried on, six worked under the 'moist rules,' four with the use of fans. In all the remaining cases the exhaust was found defective. In two the ducts required cleansing, in one the fan was so little sheltered that the exhaust almost stopped when the wind was in a certain direction, in a fourth the hood was defective, and the ware was habitually cleaned by rubbing on a flannel apron beyond the drawing power of the fan.

"In every aerographer's case the certifying surgeon reports the worker suffering from lead poisoning as 'careful,' and the increase of cases in this branch of decoration which this year constitute one-fourth of the total cases is marked and serious. In 1909 there were no cases, in 1910 one case, in 1911 three cases, and in 1912 eight cases, and one not confirmed. The work done in all was 'on glaze' decoration, and the analyses show that colours are often used containing 30 per cent. to 40 per cent. soluble lead, and even over 50 per cent. In five cases, toilet ware was being dealt with, and inquiry showed that a certain amount of plain 'all-over' coloured sets had been aerographed. This entails the use of a large amount of colour, thickly laid on, under high pressure. The hoods and throats are often not suitable for the large basins which, when inverted over the whirler, obstruct the exhaust ventilation to such an extent that the colour is not carried away, but is found in drifts round the hood. When the inside of the basin is done, I have seen the worker turn it towards herself, so causing a re-bound of the colour towards her. High pressure was contributory in one case where an over willing girl tried to do the work of two in the absence of her friend. There is little doubt that the piecework rates are such as to tend to force the pace in the cheaper work, so that the same care is not taken as where better work is dealt with.

"Aerographers are usually among the younger lead workers in the Derbyshire potteries. A case occurred where a girl was 15 on June 30, and was passed for the work on July 5; in August she was suspended with lead poisoning. The work requires a certain skill, and the women are proud of their higher earnings; they do not readily acknowledge sickness, and it is pathetic to find that at 21 to 25 they are incapacitated for the only work they understand. The prevention of further cases will depend greatly on the improved efficiency of the fans, the adaptation of hoods and throats to the changes in the work as they arise; but one can but hope that it will also be possible to lower the percentage of lead used, since, where a question of decoration of the cheapest type is at stake, it cannot be pleaded that the use of such large amounts of lead is 'essential to the production of a sanitary ware' as is alleged with regard to glazes.

"In the lithographic transfers industry special attention was given to all the factories early in the year, and many improvements have been made. The use of a power vacuum cleaner for that most dangerous process the cleaning of machines, has met with great success. Other machinery for carrying and dusting the coloured sheets is being gradually installed, so that many young girls will be displaced from this dangerous process."

Medical Inspector's Statistics.—The following figures, taken from the Medical Inspector's report, represent the notifications which have occurred during the last thirteen years of cases of poisoning by lead, and they will be found useful for purposes of comparison. The figures in parentheses illustrate the fatal cases:—China and earthenware: 1912, 80 (14); 1911, 92 (6); 1910, 77 (11); 1909, 58 (5); 1908, 117 (12); 1907, 103 (9); 1906, 107 (4); 1905, 84 (3); 1904, 106 (4); 1903, 97 (3); 1902, 87 (4); 1901, 106 (5); 1900, 200 (8). The statistics also give the usual figures showing succinctly the cases occurring in all earthenware and china factories, and for those in North Staffordshire alone, as well as incidence and attack rate per 1,000 employed, distributed according to occupation.

Medical Inspector's Observations.—In explanation of the figures the Medical Inspector says:—

"The noticeable point in the figures is the increase in the number of cases among enamel colour and glaze blowers. These cases and those in ware cleaners, which constitute 26 of the 39 cases reported among females, ought, in my opinion, never to have occurred as the processes are amenable to locally applied exhaust ventilation. The figures show rapid diminution of cases from 1899 to 1901 following on the Special Rules of May, 1898, and especially of the application of the rules requiring: (a) exhaust ventilation in dusty processes

(Rule 6); and (b) periodical medical examination (Rule 2). Since 1901 little diminution in the number of reported cases is observable, but I have no doubt that steady improvement as regards severity of attack has been going on. Since the Workmen's Compensation Act, 1906, was made applicable to lead poisoning there has been greater inclination to notify all cases especially at the extreme ends, i.e., lead absorption making suspension advisable (although there is not incapacity) and the sequelæ of lead poisoning (chronic nephritis). Thus, last year the Certifying Surgeons in the Potteries District alone have reported 15 cases (all included in the returns) following on their periodical medical examinations as compared with two in 1902 and eight in 1904. Of these, six were notified solely on account of chronic nephritis. The increase in the number of fatal cases is, in my opinion, entirely explained in this way, i.e., cerebral hæmorrhage and chronic nephritis (probable sequelæ of lead poisoning) are more frequently entered now on death certificates of pottery workers employed in lead. None of the fatal cases reported in 1911 or 1912 in china and earthenware were due to acute lead poisoning (lead encephalopathy). In 1899 there were six and in 1900 three. One, however, occurred in the manufacture of litho-transfers."

It would thus appear that the figures do not really reflect a state of things quite so serious as one would at first suppose, though it must not be imagined that we are inclined to regard lead poisoning, either mild or severe in its symptoms, as something to be regarded apathetically.

There are many other very interesting particulars contained in the Medical Officer's report, but we have already exceeded the space at our disposal.

The following are the EXPORTS (Manufactures of the United Kingdom) TO THE VARIOUS COUNTRIES during the last two years.

PORCELAIN, CHINAWARE, and PARIAN WARE:	1911. £	1912. £
To Germany	8,620	9,099
,, Belgium	2,092	2,529
,, Franee	3,968	5,081
,, United States of America	75,395	76,294
,, Brazil	2,213	1,138
,, Argentine Republie ..	6,650	6,686
,, Other Foreign Countries..	20,015	19,968
Total to ForeignCountries	118,953	120,795
To Cape of Good Hope ..	753	1,249
,, Natal	650	1,133
,, British India	8,717	7,778
,, Australia:		
Western Australia ..	483	767
South Australia (includ. Northern Territory)	1,212	1,158
Vietoria..	5,293	5,332
New South Wales ..	7,664	8,683
Queensland	448	394
Tasmania	98	85
,, New Zealand	4,267	4,424
,, Canada	21,475	19,068
,, Other British Possessions	4,846	5.280
Total to British Possessions	55,906	55,351
Total ..	174,859	176,146
FLOOR TILES for Tesselated Pavement:		
To Brazil	3,461	4,765
,, Uruguay	6,454	3,725
,, Argentine Republie ..	19,522	15,382
,, Other Foreign Countries..	14,712	13,918
Total to Foreign Countries	44,149	37,790
To British India	14,528	8,744
,, Australia	6,930	9,539
,, New Zealand	4,415	1,224
,, Canada	9,221	9,165
,, Other British Possessions..	6,196	7,059
Total to British Possessions	41,290	34,731
Total ..	85.439	72.521
All other Tiles (except Roofing and Street Paving):		
To Brazil	3,356	8,541
,, Uruguay	6,474	4,177
,, Argentine Republic ..	26,975	35,694
,, Other Foreign Countries..	17,598	21,373
Total to Foreign Countries	54,403	69,785
To British India	10,564	10,294
,, Australia	14,791	27,938
,, New Zealand	9,900	12,103
,, Canada	16,692	22,968
,, OtherBritish Possessions..	9,361	15,325
Total to British Possessions	61,308	88,628
Total ..	115,711	158.413

SANITARY WARE:	1911. £	1912. £
To Russia	27,176	33,311
,, Denmark (inclg. Faroe Is.)	14,735	15,088
,, Germany	42,157	36,780
,, Netherlands	30,283	36,889
,, Belgium	24,479	31,480
,, France	40,523	58,372
,, Switzerland	13,805	18,508
,, Italy	25,959	27,823
,, Brazil	28,760	32,787
,, Argentine Republie ..	67,992	56,310
,, Other Foreign Countries ..	81,359	93,134
Total to Foreign Countries	397,228	440,482
Total to British Possessions	63,687	90,052
Total ..	460,915	530,534
OTHER EARTHENWARE (including semi-Porcelain and Majolica):		
To Russia	8,975	9,515
,, Denmark	8,881	11,161
,, Germany	23,665	21,591
,, Netherlands	10,603	12,314
,, Belgium	11,169	9,908
,, Franee	34,521	28,279
,, Spain	4,407	5,089
,, Italy	7,903	8,914
,, Egypt	6,127	5,588
,, China (exclusive of Hong Kong, Maeão and Weihai-Wei)	8,234	9,090
,, United States of Americe	347,770	315,601
,, Cuba	17,899	14,688
,, Mexieo	11,126	15,252
,, Peru	12,267	21,661
,, Chile	43,531	48,684
,, Brazil	138,807	129,237
,, Uruguay	14,682	17,608
,, Argentine Republic ..	100,929	104,863
,, Other Foreign Countries..	80,302	84,562
Total to Foreign Countries	891,798	873.605
To British West Afriea ..	39,172	35,154
,, Cape of Good Hope ..	38,209	40,143
,, Natal	19,503	20,592
,, Transvaal	34,153	27,931
,, British India *via*:		
Bombay (incl. Karachi)	27,508	22,460
Madras	9,273	8,743
Bengal	14,937	14,438
Eastern Bengal &Assam	287	112
Burmah	41,666	41,929
,, Australia:		
Western Australia ..	20,516	16,727
South Australia (includ. Northern Territory)..	21,570	20,488
Victoria..	73,224	74,225
New South Wales ..	91,010	86,185
Queensland	31,237	26,813
Tasmania	5,962	5,820

Other Earthenware (including semi-Porcelain and Majolica), *continued:*	1911 £	1912. £
To New Zealand	89,748	96,619
,, Canada	288,979	346,500
,, Other British Possessions	89,856	88,783
Total to British Possessions	936,810	973,662
Total	1,828,608	1,847,267
Jet, Rockingham, and Glazed Terra-Cotta Ware:		
Total to Foreign Countries	4,716	4,970
To Australia	28	148
,, Canada	1,184	3,095
,, Other British Possessions	310	317
Total to British Possessions	1,522	3,560
Total ..	6,238	8,530
Red Pottery, Stoneware, Brown and Yellow Ware:		
To Russia	12,429	13,161
,, Denmark	6,543	6,520
,, Germany	2,480	3,028
,, Netherlands	2,955	3,469
,, Belgium	11,670	7,283
,, Franee	6,071	5,391
,, Spain	3,897	3,952
,, Egypt	10,318	7,675
,, United States of Americe	906	1,206
,, Cuba	9,148	11,462
,, Peru	2,275	1,713
,, Brazil	32,352	55,113
,, Argentine Republic ..	47,842	41,311
,, Other Foreign Countries	40,951	34,603
Total to Foreign Countries	189,837	195,887
To Cape of Good Hope ..	2,454	3,446
,, Natal	4,924	4,441
,, British India:		
Bombay (inel. Karachi)	9,762	10,009
Madras	6,632	3,003
Bengal	3,409	4,517
Eastern Bengal &Assam	32	—
Burmah..	787	1,666
,, Straits Settlements and Dependeneies	3,121	2,798
,, Ceylon and Dependeneies	8,583	9,053
,, Australia	10,980	14,603
,, New Zealand	2,616	3,895
,, Canada	45,308	42,645
,, British West India Islands	959	918
,, Other British Possessions	17,301	16,699
Total to British Possessions	116,868	117,699
Total ..	306,705	313,586

EXPORTS (Manufactures of the United Kingdom) to THE VARIOUS COUNTRIES—*continued.*

OTHER SORTS (including Electrical Ware, Door-Fittings and Chemical Ware):	1911. £	1912. £
To Russia	791	269
„ Denmark (incl. Farĕe Is.)	56	15
„ Germany	479	331
„ Netherlands	272	414
„ Belgium	779	268
„ France	731	1,040
„ Portuguese East Africa	387	134
„ Italy	619	409
„ Egypt	748	1,030
„ United States of America	954	864
„ Mexico	600	142
„ Chile	930	907
„ Brazil	2,806	3,122
„ Uruguay	640	551
„ Argentine Republic	9,316	5,800
„ Other Foreign Countries	3,662	4,322
Total to Foreign Countries	23,770	19,618
To British West Africa	1,287	421
„ Cape of Good Hope	2,337	2,223
„ Transvaal	6,278	1.038
„ British India	3,879	5,997
„ Australia	3,750	3,837
„ New Zealand	2,818	4,230
„ Canada	1,009	1,008
„ Other British Possessions	5,781	7,012
Total to British Possessions	27,139	25,766
Total	50,909	45,384
CLAY, Unmanufactured: China Clay.		
To Russia	48,685	51,243
„ Germany	83,825	100,298
„ Netherlands	64,610	69,879
„ Belgium	45,376	52,229
„ France	46,877	43,457
„ United States of America	299,594	304,948
„ Other Foreign Countries	67,934	67,436
Total to Foreign Countries	656,901	689,490
To British India	25,869	37,389
„ Canada	26,393	16,324
„ Other British Possessions	3,179	2,619
Total to British Possessions	55,441	56,332
Total	712,342	745,822
CLAY, Unmanufactured: Fire Clay.		
To Germany	1,393	1,783
„ Netherlands	3,160	3,526
„ France	657	1,952
„ Spain	3.868	3.891
„ Italy	2,463	2,415
„ Argentine Republic	2,574	3,342
„ Other Foreign Countries	10,749	12,121
Total to Foreign Countries	24,864	29,030
To British India	3,037	3,414
„ Canada	5,161	5,074
„ Other British Possessions	4,013	4,091
Total to British Possessions	12,211	12,579
Total	37,075	41,609
CLAY, Unmanufactured: Other Sorts.		
To Russia	1,143	1,699
„ Sweden	2,858	2,892
„ Germany	7,331	10,028
„ Netherlands	6,031	6,338
„ Belgium	12,210	15,844
„ France	2,762	2,055
„ Spain	1,924	1,268
„ Italy	1,420	1,852

CLAY: Other Sorts—(*Continued*)	1911. £	1912. £
To United States of America	8,688	13,430
„ Other Foreign Countries	2,852	5,889
Total to Foreign Countries	47,219	61,295
To British India	766	15
„ Canada	28	403
„ Other British Possessions	195	192
Total to British Possessions	989	610
Total	48,208	61,905
GLASS—Plate:		
To Denmark (incl. Faröe Is.)	1,467	4,297
„ Germany	19,153	18,233
„ Netherlands	19,160	26,733
„ Italy	11,436	5,948
„ Egypt	1,470	5,741
„ China (exclusive of Hong Kong, Macão, and Wei-hai-Wei)	1,040	1,212
„ Japan (includ. Formosa)	12,794	15,828
„ United States of America	4,909	201
„ Argentine Republic	49,105	45,142
„ Other Foreign Countries	24,457	26,734
Total to Foreign Countries	144,991	150,069
To Cape of Good Hope	7,582	8,087
„ Natal	4,581	4,020
„ Transvaal	9,880	10,196
„ British India	20,493	23,552
„ Australia	36,603	25,850
„ New Zealand	13,407	10,854
„ Canada	109,910	149,260
„ Other British Possessions	10,187	11,573
Total to British Possessions	212,643	243,392
Total	357,634	393,461
GLASS—Flint, Plain, Cut, or Ornamented, and other Manufactures of Flint Glass (except Bottles):		
To Russia	3,007	2,623
„ Denmark (incl. Farŏe Is.)	2,936	2,330
„ Germany	18,955	20,255
„ Netherlands	4,091	4,456
„ Belgium	2,392	2,670
„ France	10,286	12,580
„ Italy	3,091	1,665
„ Austria-Hungary	2,228	1,612
„ Egypt	2,254	2,033
„ China (exclusive of Hong Kong, Macão, and Wei-hai-Wei)	3,040	3,331
„ United States of America	38,492	59,080
„ Chile	3,759	3,509
„ Brazil	4,090	4,047
„ Argentine Republic	11,806	13,387
„ Other Foreign Countries	18,510	18,610
Total to Foreign Countries	128,937	152,188
To Cape of Good Hope	6,642	9,044
„ Natal	3,694	3,517
„ Transvaal	4,189	4,344
„ British India, via:		
Bombay (incl. Karachi)	19,867	17,078
Madras	4,975	4,813
Bengal	17,861	16,281
Eastern Bengal & Assam	34	112
Burmah	3,024	3,332
„ Straits Settlements and Dependencies	4,320	4,096
„ Australia:		
Western Australia	1,726	2,206
South Australia (includ. Northern Territory)	3,543	4,444
Victoria	13,027	14,043
New South Wales	15,444	13,643
Queensland	4,120	3,620
Tasmania	637	763
„ New Zealand	9,846	10,037

GLASS—Flint, Plain, Cut, or Ornamented, and other Manufactures of Flint Glass—(*Continued*)	1911. £	1912. £
To Canada	11,594	16,290
„ Other British Possessions	17,495	18,205
Total to British Possessions	142,038	145,868
Total	270,975	298,056
Glass Bottles—		
To Netherlands	2,329	2,205
„ Belgium	15,158	19,380
„ France	10,783	11,460
„ Portuguese East Africa	4,380	5,586
„ Spain	3,233	3,246
„ Egypt	9,362	9,694
„ China (exclusive of Hong Kong, Macão, and Wei-hai-Wei)	3,653	3,744
„ United States of America	83,941	70,085
Philippine Islands and Guam	4,183	4,238
„ Cuba	5,496	7,141
„ Brazil	8,701	9,880
„ Argentine Republic	27,012	19,747
„ Other Foreign Countries	42,159	49,599
Total to Foreign Countries	220,390	216,005
To Cape of Good Hope	20,050	23,109
„ Natal	17,529	19,696
„ Transvaal	12,689	15,175
„ British India, via:		
Bombay (incl. Karachi)	23,867	19,524
Madras	6,412	7,157
Bengal	14,429	16,783
Eastern Bengal & Assam	27	115
Burmah	23,088	33,146
„ Straits Settlements and Dependencies	28,581	33,463
„ Australia:		
Western Australia	12,458	11,581
South Australia (includ. Northern Territory)	12,044	15,173
Victoria	26,819	35,014
New South Wales	32,630	37,219
Queensland	12,738	16,309
Tasmania	1,206	2,223
„ New Zealand	28,695	28,779
„ Canada	28,928	34,305
„ British West India Islands	22,546	23,104
„ Other British Possessions	44,045	55,110
Total to British Possessions	368,781	426,985
Total	589,171	642,990
GLASS MANUFACTURES: Other sorts:		
To Denmark (incl. Faröe Is.)	14,399	17,333
„ Germany	25,417	17,245
„ Netherlands	1,948	2,265
„ France	3,627	5,210
„ Italy	3,700	4,485
„ Turkey	3,157	616
„ Egypt	9,546	3,037
„ Japan (includ. Formosa)	15,525	11,773
„ United States of America	41,658	25,496
„ Brazil	17,554	24,369
„ Argentine Republic	74,178	60,885
„ Other Foreign Countries	31,079	30,094
Total to Foreign Countries	241,788	202,808
To Cape of Good Hope	3,932	5,570
„ Natal	2,563	3,608
„ Transvaal	3,471	4,239
„ British India	13,630	16,288
„ Australia	34,035	50,500
„ New Zealand	13,871	19,487
„ Canada	137,276	169,931
„ Other British Possessions	15,568	14,055
Total to British Possessions	224,346	283,678
Total	466,134	486,486

Trade Notes.

The Editors are always glad to receive items of trade intelligence, such as removals, new premises, personal items, &c.; also marked local newspapers.

Mrs. Beech, glass and china dealer, 4, Union-road, Stockport, is having her premises altered and improved.

Mr. John Richard Clayton, who died in London on July 5 in his 87th year, was principal member of the firm of Clayton & Bell, glass painters.

Mr. C. Barrow, glass and china dealer, 2, Fuller's Hill, Great Yarmouth, announces that he is relinquishing the business owing to his departure from the district.

"The Pottery Gazette" Diary and Trade Directory for 1914 will finally close for press on Sept. 16. All matters relating to this publication should reach the publishers during August.

The Royal Art Pottery Co., of Waterloo Works, Stafford-street, Longton, have appointed Mr. C. E. Bevington as their London representative at their showrooms, 10, Holborn-circus, E.C.

Mr. Rene P. Luce, 69, Hatton-garden, E.C., has been appointed representative for the United Kingdom of La Cristallerie de Lyon, Oullins (Rhone), and A. Delaunay & Co., Saint-Uze (Drôme).

Mr. W. H. Thornton, head of the firm of Thornton Bros., wholesale glass and china dealers, Gillingham, is included amongst a number of new magistrates appointed for the County of Kent.

Mr. Enos Horsman, for many years manager of the Seamer-road Tile Works, Scarborough, died on July 6, at the age of 63 years. Deceased was deeply interested in education, and served on the old School Board.

The death has taken place of Mr. T. Marriott, glass and china dealer, Wellingborough. Deceased, who was only 37 years of age, was well known in the district, and had stalls at both the Wellingborough and Kettering markets.

British Clay Exports for the six months ending June 30, 1913, were :—China clay, 356,868 tons (£417,811) ; fireclay, 29,776 tons (£22,930) ; other sorts, 39,136 tons (£31,258). Exports for the first six months of 1912 were :—China clay, 325,717 tons (£366,521) ; fireclay, 21,087 tons (£16,964) ; other sorts, 31,932 tons (£25,001).

The Benevolent Institution.—The Festival Dinner is to be held on Tuesday, Nov. 18, 1913, at Whitehall Rooms of Hotel Metropole. The Earl of Crewe will preside, and the vice-chairman will be Mr. H. M. Robinson (Minton's, Ltd.). The arrangements are being made by an influential committee representing manufacturers, agents, buyers, and dealers. The chairman of the dinner committee is Mr. Percy Brooks (Harrods, Ltd.).

Pushing Leadless Glaze Ware.—The Hyde (Cheshire) and District Trades Council are endeavouring to induce the local tradesmen to stock only leadless glaze ware. At a recent meeting of the Council, the chairman announced that one of the pottery dealers at Denton, who was interested in the movement, had been to see him, and said he did not know where he could get the leadless glaze ware from. Two delegates gave reports of satisfactory visits to shops in the district, but another announced that a Hyde trader had said that "it was self first and pottery workers after." The chairman observed that if they could cultivate a demand for leadless glaze ware the dealers were bound to stock it.

Presentations.—On the occasion of his marriage, Mr. W. Champion, captain at the Candledown Clay Works, Stenalees, St. Austell, has been presented by the employees with a silver spirit lamp and kettle and a set of silver-mounted carvers.——Mr. G. Venn, of Burnham (Somerset), representative of Colthurst, Symons & Co., Ltd., tile manufacturers, East Quay, Bridgwater, who has retired after 45 years' service, has been presented by the directors with a purse of gold in recognition of his long and faithful service.——The directors, staff, and employees of the Coalport China Co., Ltd., Coalport, have presented a purse of gold to Mr. Geo. Debney, who is leaving after 23 years' service to settle in Canada. The presentation was made on July 11 by the managing director, Mr. C. E. Bruff.

Devon Clayworkers' Strike.—A strike commenced among clay-cutters in the Kingsteignton and Newton Abbot districts early in July. The alleged cause was the employers' intimation that an advance of 2d. per ton, recently granted temporarily, would not be continued. Several hundred men stopped work, their action being endorsed by the Union. The employers on their part have refused to recognise the Union. The employers as a whole, although the rates paid vary considerably, maintain that the miners at least are well paid, but in view of the nature of the work and the enhanced cost of living, the men hold that their demands for a minimum of 3s. 6d. per diem, or 21s. per week, are moderate. There has been much discussion of the points at issue on the platform and in the local papers, but at the time of going to press no settlement had been arrived at.

Echo of a Pottery Strike.—At the July meeting of Bo'ness Town Council—Provost Grant in the chair—Mr. M'Kenzie asked the sanitary inspector whether it was the case that a certain pottery company in the town had utilised part of their works during a recent strike for the purpose of housing imported labour, and, if so, whether it was necessary to get permission from the public health authorities for such action. The sanitary inspector replied that a few men were brought in by the pottery company referred to, but it was not necessary for them to apply for permission to him. Mr. M'Kenzie, still referring to the same strike, asked the Town Clerk if it was right that the Bo'ness ratepayers should pay for the protection by a special posse of police of blackleg labour. The Town Clerk said on the occasion of the woodyard strike in 1910 the ratepayers, as far as he knew, were not asked to bear the expense, and he presumed the same held good in this instance. The matter was then allowed to drop.

Recent Wills.—Mr. William Lawton, Southport, formerly in business as a china dealer, left estate to the value of £23,485.——Mr. William Haden Richardson, glass manufacturer, of the City Glass Works, Glasgow, who resided at 20, India-street, Glasgow, left estate to the value of £103,646 8s. 3d. Mr. Richardson instructed his trustees to pay £500 to the Rural District Council of Kingswinford, to be invested by them and the income to be applied by the Council to assist young men and young women in Wordsley and the parish of Kingswinford in acquiring art and technical knowledge—the fund to be known as "The Benjamin Richardson Bequest," in memory of the testator's father. His other bequests are : The trustees of the Richardson Hall, Wordsley, in memory of testator's sisters, £500, the income to be applied for prizes to be called "W. H. Richardson Prizes," to be given to members of Lads' Brigades and vocal and instrumental societies in Wordsley and the parish of Kingswinford, and by a codicil he left a further sum of £1,000 for the same purpose.

Lead Poisoning.—The total number of cases of lead poisoning reported to the Home Office under the Factory and Workshop Act during June, 1913, was 47, of which 3 were fatal. In addition there were 23 cases of lead poisoning (2 of which were fatal) reported among house

painters and plumbers. During the six months ended June, 1913, the total number of cases of lead poisoning reported under the Factory and Workshop Act was 282, as compared with 272 in the corresponding period of 1912. The number of deaths was 13 in 1913, as compared with 24. in 1912. In addition there were 135 cases of lead poisoning (including 21 deaths) among house painters and plumbers in the first six months of 1913, as compared with 109 cases (including 18 deaths) in the corresponding period of 1912. Of the 47 reported cases of lead poisoning in June last under the Factory and Workshop Act, there were 4 cases in connection with the china and earthenware trades, the persons affected being females. During the six months ended June, 1913, there were 36 reported cases, and 6 deaths in our industries as compared with 41 cases and 9 deaths during the corresponding period of 1912.

Summer Outing.—The workpeople of Mr. John Walsh Walsh, Soho and Vesta Glass Works, Birmingham, had a most enjoyable day's holiday on July 5. Stratford-on-Avon was selected for the second time. In splendid weather the historical places of interest were visited—Ann Hathaway's cottage, the Memorial Theatre, and the beautiful church. Dinner was partaken of at mid-day at the Swan's Nest Hotel, and mine host excelled himself in the sumptuous repast. Boating on the steam and electric launches occupied the whole of the afternoon, and at 5 tea was served, an institution which the men seemed specially to enjoy. Advantage was taken during this meal to propose the toast of "The Firm." Mr. Weaver (glass cutters) made an excellent address, and was ably supported by Mr. Greening and Mr. Perry. Mr. R. H. Wood, the chairman, in his reply on behalf of the firm, made a characteristic speech, enumerating some of his early experiences when travelling for the firm. During the day a telegram was despatched to the principal, Mr. Walker, who was unavoidably prevented from attending, and a reply was received stating how pleased he was that everyone had enjoyed a pleasant time.

Royal Visit to a Glassworks.—During the tour of the King and Queen through the manufacturing districts of Lancashire, their Majesties visited on July 14 the Cowley Hill Plate Glassworks of Pilkington Bros., Ltd., at St. Helens. The King was escorted through the premises by Colonel Wardle Pilkington, and the Queen by Mr. Arthur Pilkington. The manufacture of glass was seen in most of its stages, from the shovelling of the raw material into superheated furnaces to the finished products of all sizes, thicknesses, and degrees of polish, including silvered mirrors of 200 square feet, extra thick glass for port lights, and fire-resisting wired glass for windows, &c. In the electric power station the Queen christened a new 6,000 horse-power turbo-generator the "King George," and the mechanism was started by the King. At the close of the visit His Majesty spoke to a group of old workmen. Richard Siddals, aged 81, told His Majesty that he commenced working for the firm 71 years ago, and had now retired, adding that there were among the workmen 1,400 persons of over 35 years' service. King George shook hands with the veteran. By the kindness of Pilkington Bros., Ltd., St. Helens, a case of the Lancastrian pottery of the Pilkington's Tile and Pottery Co., Ltd., Clifton Junction, near Manchester, was shown at the St. Helens Glass Works, on the occasion of their Majesties' visit. Their Majesties then requested that the vases might be sent to Knowsley so that they might have time to examine them at leisure, and, as a result of this, some specimens were selected by Her Majesty the Queen for her own private use. When the King and Queen visited Manchester on July 14 they also found that the rooms that had been reserved for their private use at the Manchester Town Hall were decorated with a collection of examples of Lancastrian pottery illustrating all the important varieties of decorative vases, bowls, dishes, &c., for which the firm is famous.

The London Pottery and Glass Trades' Golf Club.—The following members (Messrs. H. H. Arnott, C. J. Cooper, A. E. Edis, E. Goode, H. Green, C. E. Green, J. E. Heath, A. O. Jones, J. Kendall, and J. Weeks) visited Deal on July 19 to play off the final round, the competitors for this being Mr. A. E. Edis (who was the winner last year) and Mr. Ernest Goode. A very interesting match again resulted in a win for Mr. Edis. There were also two other competitions, one for the best medal round, which resulted in a win for Mr. A. O. Jones, with the remarkably fine score of 68 net, Mr. J. Kendall being second. In connection with the winner's score, it might be mentioned that the first seven holes in the return half Mr. Jones did in one under bogey a splendid performance for a member of the junior division and on a championship course. The bogey competition resulted in a win for Mr. A. E. Edis, Mr. J. E. Heath and Mr. A. O. Jones dividing the second prize. We are indebted to Mr. Charles E.



POTTERY AND GLASS TRADE GOLFERS.

Green for the accompanying photograph. Mr. Goode and Mr. Edis were playing at the time, and Mr. Green took the photograph himself and so does not appear in it. This explains why three such important members are left out, but their genial countenances are no doubt already familiar to most of our readers.

The Shops Act.—Under an order issued by the Essex County Council, Wednesday has been fixed as the early closing day for the glass and china trade at Stanford-le-Hope.——Yeovil Town Council have made an order for closing at 1 p.m. on Thursdays by glass and china dealers.——Harwich Town Council have suspended half-day closing on Wednesdays until the end of September——Wednesday has been fixed as the early closing day for the glass and china trade at Witham (Essex).——The proposed closing order for Thursday at Margate is not to be proceeded with, there not being the requisite majority in favour. The leading glass and china dealers, however, have always recognised Thursday as the early closing day outside the summer season.——Quarry Bank Urban Council have decided to make an order for glass and china dealers to close on Wednesdays at 1 p.m.——For glass and china dealers at Stourbridge an order has been made for closing at 8 p.m. on Monday, Tuesday, and Wednesday; 1 p.m. on Thursday; 8.30 p.m. on Friday, and 10 p.m. on Saturday.——Wolstanton (Staffs.) Urban Council have resolved to ask the County Council to fix Thursday as

the early closing day for the glass and china trade.——At Swindon (Wilts.), the Town Council have made an order for glass and china dealers to close on Wednesdays at 1 p.m., with the exception of the Wednesday before the commencement of the trip week. In that week the early closing day is to be Thursday instead of Wednesday.——At Whitstable half-day closing has been suspended until the end of September.——At Stone (Staffs.) an order has been made fixing Thursday as the early closing day.——A confirmatory order was issued by the Isle of Wight County Council on July 14 for glass and china dealers at Bonchurch, Brading, Brighstone, Calbourne, Godshill, Newchurch, Niton, Shorwell, and Wroxall to close on Wednesdays at 1 p.m.; and those at St. Helens, Ashey, Bembridge, Carisbrooke, Chale, Freshwater, Totland, Whippingham, Whitwell, and Yarmouth on Thursdays at the same hour.——Barnstaple Town Council on July 19 issued a confirmatory order for glass and china dealers to close on Wednesdays at 1 p.m., the vote on the matter having proved satisfactory.——The Tredegar Urban Council on July 23 issued a draft closing order for glass and china dealers to close at the following hours:—Monday, Tuesday and Wednesday, 7 p.m.; Thursday, 1 p.m.: Friday, 7.30 p.m.; Saturday, 10.30 p.m. Objections or suggestions relating to the order must be sent to the Clerk, Mr. H. J. C. Shepard, before August 25.——The General Purposes Committee of the Cornwall County Council have fixed the closing hour for all non-exempted trades at Bude at 8 p.m. each day, excepting on the early closing day.——Glass, china and earthenware dealers are included in a draft closing order issued on July 23 by the Widnes Town Council. The scheduled closing hours are:—Monday, Tuesday, and Wednesday, 7.30 p.m.; Thursday, 1 p.m. or 7.30 p.m.; Friday, 8.30 p.m.; Saturday, 10 p.m. or 1 p.m. Objections or suggestions relating to the order must be sent before August 26 to the Town Clerk, Mr. H. S. Oppenheim, Town Hall.——Sandown (I.W.) Urban Council have made an order suspending half-day closing by glass and china dealers until Sept. 10.

TENDERS ACCEPTED.

For the Bacup Town Council:—Lord & Hodgson, 21 oz. glass.

For the Stockport Guardians:—Mr. T. Sutton, Stockport, crockery, £27 3s.

For the Isle of Wight Guardians:—Mr. W. Wills, St. Thomas's-square, Newport, earthenware.

For the Bristol Guardians:—Earthenware and glass, Mr. W. Cottrell, 21-22, Barrs-street, Bristol.

For the West Bromwich Guardians:—Ford & Co., West Bromwich, crockery (12 months).

For the Portsmouth Guardians:—Hancock & Son, Commercial-road, crockery (Workhouse), £30 12s. per lot; (Infirmary), £85 4s. 6d. per lot.

For the L.C.C. (recommended for acceptance):—Earthenware inkwells, palettes, and vases (Schedule No. 99), from Aug. 1 to July 31, 1916: Jacob & Schreppel, 28 and 29, London-wall, E.C. (2 items), £129; Kirkhams, Stoke-on-Trent (7 items), £630.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette." and are strictly copyright.

Messrs. Scarr, glass and china dealers, &c., have opened new premises in New York-street and Kirkgate, Leeds.

The Barnsley British Co-operative Society have opened a new glass and crockeryware department in Market-street.

Charles Massey & Son, Ltd., of Waterloo Works, Newcastle, Staffs., have removed their London office to 12, St. Mary Axe, E.C.

Young & Hodgson, Ltd., of 1, Britannia-st., King's Cross, W.C., announce that as soon as alterations are completed they will open new showrooms at 95, Hatton-garden, E.C.

Cobhams, Ltd., glass, china, and earthenware dealers, have opened business premises at 58, George-street, Croydon. The managing director of the company is Mr. Fredk. Cobham.

NEW COMPANIES, COMPANY REPORTS, &c.

Mile End Bottle Works, Ltd.—Rd. No. 8,737.—This company has been registered in Edinburgh with a capital of £5,000 in £1 shares. Objects: To carry on the business of manufacturers of glass bottles, jars, &c. The subscribers are R. Denholm, 17, Academy-street, Coatbridge, and a clerk. Private company.

Samuel Evers & Sons, Ltd.—Rd. No. 129,907.—This company has been registered with a capital of £10,000 in £1 shares, with the object of taking over the business of a firebrick works and colliery owner carried on by J. S. Evers-Swindell at Homer Hill, Cradley, as Samuel Evers & Sons. Private company. Registered office: Homer Hill, Cradley, Worcester.

E. Herbert & Co., Ltd.—Rd. No. 129,864.—This company has been registered with a capital of £2,000 in 5s. shares. Objects: To carry on the business of manufacturers of and dealers in fireproof china, hardware, pottery and glass, &c., and to adopt an agreement with H. E. Komlosy. The subscribers are two clerks. Private company. Registered office: 82, Pentonville-road, N.

W. L. Foulston & Co., Ltd.—Rd. No. 129,768.—This company has been registered with a capital of £5,000 in £1 shares. Objects: To carry on the business of glass bottle manufacturers and merchants, glass blowers and pressers, manufacturers of chemical, medical and surgical utensils and appliances, &c. The subscribers are W. L. Foulston, 86, Victoria-avenue, Hull, and three others. Private company.

Ashgate Pottery Co., Ltd.—Rd. No. 130,011.—This private company has been registered with a capital of £2,000 in £1 shares, to take over the business of general potters and manufacturers of and dealers in earthenware, fire-clay goods, china and glass, carried on by T. Heath, J. Heath, and A. Heath, at Ashgate-road, Chesterfield, as Heath Bros. The subscribers are T. Heath, Ashgate-road, Chesterfield, and three others.

David Nestle, Ltd.—Rd. No. 129,490.—With a capital of £1,000 in £1 shares, this company has been registered with the object of taking over the business of a china and glass agent and merchant carried on by D. Nestle at 7, Hatton-garden, E.C. The subscribers are D. Nestle, 7, Hatton-garden, E.C.; and Mrs. L. Nestle, 87, Cavershan-avenue, Palmers Green, N. Private company. Registered office: 7, Hatton-garden, E.C.

Dale, Brown & Co., Ltd.—Rd. No. 130,166.—This company has been registered with a capital of £20,000 in £1 shares. Objects: To carry on the business of manufacturers of and dealers in glasswares, bricks, tiles, pipes, pottery, earthenware, china, terra cotta, bottle stoppers, hardware, &c. The subscribers are J. L. Brown, Rosecliffe, Roundhay, Leeds; W. R. Dale, 130, Stapleton Hall-road, Stroud Green, N. Private company. The first directors are J. L. Brown and W. R. Dale.

James Kent, Ltd.—Rd. No. 130,247.—This private company has been registered with a capital of £25,000 in £1 shares, the objects being to take over the business of a china and earthenware manufacturer carried on by J. Kent at the Old Foley Pottery, Longton, and that of a flint and bone miller, grinder and dealer carried on by him at Bakers Mill, Fenton. The subscribers are J. Kent, Old Foley Pottery, Longton; A. Cartlidge, Maitland

Harpfield, Stoke-on-Trent ; and F. Brown, 301, Uttoxeter-road, Longton.

Weiss & Biheller, Ltd.—Rd. No. 129,889.—This company has been registered with a capital of £100,000 in £1 shares, to take over the business of merchants, manufacturers, importers, and exporters of and dealers in glass, china, incandescent bulbs, &c., carried on by Weiss & Biheller at 70 and 71, Chiswell-street, E.C., and to adopt an agreement with A. Weiss, S. Biheller and C. G. Brooks. The subscribers are A. Weiss, Druuham, Oatlands Chase, Weybridge, Surrey ; and S. Biheller, 41, Compayne-gdns., Hampstead, N.W. Private company. Registered office : 70 and 71, Chiswell-street, E.C.

Liens, Debentures, Satisfactions, &c.—Allertons, Ltd., Longton.—Reg. £9,000 debs. ; also £5,000 2nd debs. ;. secured by general charge.——Aylesford Pottery Co., Ltd., —Reg. £1,500 equitable charge (agreement to issue debs.). to H. L. C. Brassey, Apethorpe Hall, Wansford ; charged on property comprised in trust deed ; also a general charge. ——Candlish (Robert) & Son, Ltd., Seaham Harbour.—Satisfaction reg. £15,300.——Dressler Tunnel Ovens, Ltd. (formerly Northolt Tile Works, Ltd.), London, S.W.—Reg. £5,000 2nd debs., amount of present issue being £2,225 ; general charge.——Triplex Safety Glass Co., Ltd., London, W.—Reg., £3,181 second deb., to R. G. M. Delpech, 2, Southwick-street, Hyde Park ; general charge, subject to prior charge.——Aston Magna Brick and Tile Co., Ltd., London, E.C.—Reg. £30 debs., part of £10,000 ; general charge.——Anglo-Belge Glass Association, Ltd., London, E.C.—Reg. £300 (not ex) charge, to Lloyds Bank, Ltd. ; charged on Rose Cottage, Wherstead-rd., Ipswich.—— Eclipse Glass Works, Ltd., London, E.—Satisfaction reg., £550.——Bretby Brick and Stoneware Co., Ltd., Newhall (Derby).—Reg. £200 C debs., part of £1,000 ; secured by general charge.

THE UNITED STATES POTTERY INDUSTRY.

FORMERLY the reports of the U.S. Geological Survey on the clay-working industries of that country have been issued about twelve months after the year with which they deal. This year, however, a special monograph on the pottery industry has been published some six months earlier. The compiler, Mr. Jefferson Middleton, states that the industry made considerable progress in 1912. The year opened with bright prospects, and these were so fully realised that the value of the pottery products marketed was the largest in the history of the industry. This was due partly to the general prosperity enjoyed by the country at large, but more especially to the steady improvement in the wares themselves in body, design, and decoration. American pottery is gaining a stronger hold on the market and is becoming more popular every year. Many, if not most, of the best hotels and clubs in the country are now using large quantities of domestic pottery.

With the value of the domestic pottery increasing and the imports decreasing, the outlook for the industry seems to be that 1913 will show even greater progress than 1912. The proportion of domestic production to consumption in 1912 was the highest ever reached—81·45 per cent. This, of course, applies to all pottery products, but the domestic production of general wares alone is nearly two-thirds of the consumption. In 1911 this percentage was 78·93 and in 1910 it was 77·08, and the next highest was in 1902, when it was 72·91.

The number of operating firms reporting continued to decrease, a loss of 15 appearing for 1912, the decrease being principally in plants making the lower grades of ware. A number of plants making white ware also went out of business, but new plants in contemplation at the close of the year, if erected, will nearly, if not quite, take the place in productive capacity of those that ceased operations.

The following figures show the statistics of the production of pottery in the United States in 1912 :—Number of operating firms reporting, 434 ; red earthenware, $958,270 ; stoneware and yellow and Rockingham ware, $3,919,778 ; white ware, include C.C. ware, &c., $14,829,431 ; china, bone china, delft, and belleek ware, $2,177,305 ; sanitary ware, $7,902,255 ; porcelain electrical supplies, $4,927,316 ; miscellaneous, $1,789,809 ; total, $36,504,164.

This shows that the value of the pottery products of the United States in 1912 was the largest yet reported, exceeding that of 1911 by $1,985,604, or 5·75 per cent., and that of 1910 by $2,719,486, or 8·05 per cent. Only one variety decreased in value in 1912—stoneware, &c.—which declined $200,830, or 4·87 per cent. With the exception of stoneware, every product reached its maximum value in 1912, the variety showing the largest gain being sanitary ware, which increased $870,797, or 12·38 per cent. The largest proportional gain was in porcelain electrical supplies, which increased $695,215, or 16·43 per cent. The value of white ware, including china, but excluding sanitary ware and porcelain electrical supplies, was $17,006,736 in 1912, as compared with $16,424,236 in 1911, an increase of $582,500, or 3·55 per cent. These articles constituted 46·58 per cent. of all pottery products in 1912, and 47·58 per cent. in 1911. If the value of sanitary ware and porcelain electrical supplies be added, the value for 1912 would be $29,836,307, or 81·73 per cent. of all pottery products, an increase of $2,148,512, or 7·76 per cent. over the figures for 1911.

Chinaware showed an increase of 5·80 per cent. The value reported for 1912 was the highest ever recorded. In fact, this product has increased almost steadily since 1902, the value in 1912 being $958,012, or 78·57 per cent. greater than that for 1902.

The imports of clay products in 1912 were :—Brown earthen and common stoneware, including Rockingham ware, $152,166 ; china and porcelain not decorated, $1,094,152 ; china and porcelain decorated, $8,309,212 ; total, $9,555,530 ; brick, fire brick, tile, &c., $166,322 ; grand total, $9,721,852. The imports of all clay products in 1912 decreased $1,082,897, or 10·02 per cent. ; in 1911 there was a decrease of $548,592, or 4·83 per cent. Of the imports for 1912, 98·29 per cent. was pottery and 1·71 per cent. brick and tile. Of the pottery imports, 98·41 per cent. was of the higher grades and 1·59 per cent. was of the lower grades. The pottery imports decreased $1,083,086, or 10·18 per cent. in 1912, and the brick and tile imports remained practically stationary, increasing $189, or 0·11 per cent. For the first time in 10 years the imports of pottery fell below $10,000,000, and were the lowest since 1901. The imports of pottery in 1912 showed a decrease from 1907, the year of maximum imports, of $4,030,082, or nearly 30 per cent.

Changsha Pottery and Glass Works.—The provincial Government at one time proposed to contribute some capital, and to take over the management of the Liling Porcelain Works, but this plan was eventually abandoned. Another porcelain factory is to be established at T'ao Yuan, to which the Government have agreed to contribute the sum of 100,000 taels (about £15,000). A glass factory on a small scale has also been established in Changsha. It turns out bottles of various kinds, lamp glasses, and shades, and similar articles, under the direction of instructors drawn from Po-shan, in the province of Shantung, celebrated for its glassware.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR JUNE, 1913.

		Quantities.				Value.			
		Month ended June.		Six Months ended June.		Month ended June.		Six Months ended June.	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	191
To Germany	cwts.	5,621	2,564	24,754	18,238	£5,838	£4,168	£31,464	£30,4
„ France	„	4,687	11,485	39,606	47,720	7,062	11,046	40,373	56,6
„ United States of America	„	24,013	20,193	125,736	136,197	35,062	32,123	177,997	205,2
„ Brazil	„	30,926	32,793	191,995	208,020	19,026	25,569	101,858	157,1
„ Argentine Republic	„	29,012	64,523	171,131	276,312	21,107	29,071	126,803	165,3
„ British South Africa	„	14,461	13,154	52,026	78,505	9,510	10,178	55,071	71,1
„ British East Indies	„	28,499	31,365	182,396	207,763	18,348	22,665	109,465	135,1
„ Australia	„	15,662	20,055	124,265	148,972	20,442	28,339	148,719	164,8
„ New Zealand	„	2,785	6,326	37,845	41,548	3,680	9,497	51,887	60,0
„ Canada	„	53,342	60,285	202,715	313,018	42,522	47,414	180,402	254,2
„ Other Countries	„	105,641	107,767	519,836	609,739	70,563	74,359	344,267	407,3
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	„	1,178	1,764	6,980	9,093	9,788	16,466	63,223	89,6
Floor Tiles for Tesselated Pavement	„	8,854	5,950	36,476	39,896	8,262	5,003	36,748	35,1
All other Tiles (except Roofing and Street Paving)	„	17,747	16,303	67,430	89,897	13,056	16,777	62,631	92,2
Sanitary Ware	„	27,530	33,255	161,612	200,793	41,309	49,878	226,361	290,0
Electrical Ware, Door Fittings, and Chemical Ware	„	2,944	2,585	21,197	27,383	2,864	3,262	19,453	26,0
Other Earthenware (including Semi-Porcelain and Majolica)	„	117,649	122,824	639,297	726,085	152,175	165,493	830,549	974,0
Jet, Rock'm, and Glazed Terra-cotta	„	94	20	1,103	4,173	307	13	1,973	3,7
Red, Stone, Brown and Yellow Ware	„	138,653	187,809	738,210	988,712	25,399	37,537	127,368	196,6
GLASS.									
To British South Africa	value £	—	—	—	—	7,073	7,053	46,903	52,2
„ Other Countries	„	—	—	—	—	130,126	136,218	782,059	870,1
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	17,201	16,916	105,485	133,272	29,364	28,770	178,242	215,8
Flint Glass	„	5,458	6,575	43,012	41,326	19,541	24,698	138,231	150,5
Glass Bottles	gross	73,374	76,820	475,672	484,544	47,500	49,219	288,986	300,3
Glass Manufactures, unenumerated	cwts.	56,181	50,866	309,320	319,766	40,794	40,584	223,503	255,6

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR JUNE, 1913.

Porcelain, Chinaware, and Parian	cwts.	3,329	3,113	18,210	21,253	£17,489	£13,687	£92,226	£109,6
Floor Tiles for Tesselated Pavement	„	8	81	258	949	34	87	284	7
All other Tiles (except Roofing and Street Paving)	„	1,463	3,213	13,263	18,207	1,175	2,131	8,551	11,4
Sanitary Ware	„	5	27	263	96	21	78	536	2
Electrical Ware, Door Fittings and Chemical Ware	„	1,536	2,291	13,288	14,975	2,800	3,896	20,848	24,4
Other Earthenware (including Semi-Porcelain and Majolica)	„	21,074	28,484	150,966	164,573	42,627	56,960	297,774	332,6
Jet, Rock'm, and Glazed Terra-cotta	„	—	43	23	586	—	88	89	1,2
Red, Stone, Brown and Yellow Ware	„	12,567	20,771	127,920	168,651	4,242	6,706	30,079	37,2
Window and German Sheet Glass	„	60,693	85,656	624,013	608,478	38,267	50,185	355,447	343,3
Plate Glass	„	16,041	43,547	160,330	248,861	16,812	54,835	199,928	299,4
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	„	58,756	73,647	401,181	457,107	91,653	100,544	598,283	626,3
Glass Bottles	gross	116,377	152,341	850,270	983,179	47,353	65,335	366,557	411,0
Glass Manufactures, unenumerated	cwts.	1,901	128	10,177	1,394	1,524	155	8,639	2,9

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR JUNE, 1913.

Porcelain, Chinaware, and Parian	cwts.	295	712	4,092	6,011	£1,999	£3,967	£22,536	£31,9
Of all Other Sorts	„	215	775	4,826	7,411	489	1,523	5,652	14,2
Window and German Sheet Glass	„	131	442	4,326	2,919	102	251	2,506	1,6
Plate Glass	„	74	656	1,973	5,769	80	1,057	2,774	8,3
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	„	548	1,080	6,350	7,813	1,404	3,704	16,766	23,4
Glass Bottles	gross	833	5,649	19,854	31,618	382	3,217	10,936	17,9
Glass Manufactures, unenumerated	cwts.	12	31	1,000	698	27	65	1,161	5

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from May 25, 1913, to June 25. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to June 25. Packages.	Corresponding Period, 1912. Packages.
Boston	419	643	4,067	3,288
New York	504	701	4,601	3,932
Baltimore	571	957	3,128	3,910
Philadelphia.....	124	281	1,313	1,661
New Orleans.....	125	166	717	465
Newport News...	—	—	35	48
San Francisco ...	166	194	668	687
Portland, Maine.	16	22	1,299	630
Galveston	43	—	104	219
Portland, Oregon	42	28	203	110
Inland Points ...	58	59	394	282
Total	2,068	3,051	16,529	15,232

THE POTTERY AND GLASS TRADE OF GERMANY.

THE total German foreign trade in earthenware, according to a British Consular Report just published, amounted to :—

	Imports. 1911.	Imports. 1912.	Exports. 1911.	Exports. 1912.
Total in 1,000 dz. ...	1,789	1,803·4	6,103·3	6,721·8
,, 1,000 marks ...	7,167	7 463	95,650	101.300

Even if the increase in the export of earthenware goods as not been as great as in the preceding year, the progress nade is steady and entirely sound.

During the last decades great efforts have been made to aise the standard of this German industry, and thus to epel the Bohemian competition in Germany. These erman efforts have been greatly assisted by the large o-operative stores which have very considerably raised ie consumption of the German potteries. They naturally avoured the German manufacture, and by concluding ontracts spread over prolonged periods enabled the Ger- anufactories to undertake improved and extended methods f production. The Government further assisted these forts by the establishment of technical schools under ie management of recognised authorities—artistic and chnical. The industrial exhibition in Munich provided welcome opportunity for testifying to the excellent sults of the methods adopted. The exhibition, more pecially of porcelain wares, was of a very high standard ; ie wholesome effect of the technical teaching was gener- ly recognised.

In the Anglo-German trade, the German export of white ina insulators has receded, but the export is still 1,000 . higher than that of 1910 ; the reduction in the port to the United Kingdom of white table china nounts to over 2,000 dz. ; the export of articles of xury in porcelain has risen, and was in 1912 nearly 000 dz. higher than in 1910. The export of coloured bleware has risen by 1,600 dz. (total German export this class has risen by 13,000 dz., the increase in the port to the Dutch Indies amounting to 12,000 dz. ; Belgium the export has doubled, amounting to nearly ,000 dz.)

EXPORTS OF EARTHENWARE.

Articles.	Country.	1911. Dz.	1912. Dz.
sulators of white china ...	United Kingdom	10,228	8,74
hite china tableware... ...	United Kingdom	4,734	2,40
ares of china in combination with other materials—			
Table utensils	United Kingdom	49,392	50,983
	Australia ...	—	11,142
Ornaments, figures and articles of luxury ...	United Kingdom	17,971	17,555

The total German foreign trade in glass and glassware amounted to :—

	Imports. 1911.	Imports. 1912.	Exports. 1911.	Exports. 1912.
Total in 1,000 dz. ...	253·2	200·6	1,935·4	2,116·8
,, 1,000 marks ...	20,064	19,625	108,400	118,409

The value of the export has risen by 10,000,000 mk. The value of the import has remained nearly stationary, but the quantities of the import have receded by 50,000 dz.

The total export of hollow glass (neither pressed nor cut, of natural colour) has for the first time exceeded 1,000,000 dz. ; there have been considerable increases in this export to the United Kingdom and British colonies; the United Kingdom alone took nearly one-fourth of the total export. There has been an increased total export also of white hollow glass ; it amounted to roughly 240,000 dz., of which the United Kingdom consumed one-third. The total export of pressed glass has receded. The total export of plate glass has remained stationary with 53,000 dz. ; the export to the United Kingdom has receded by nearly 18 per cent. ; the increased export to Canada is worth noticing—it amounted in 1911 to only 830 dz., but in 1912 to 2,700 dz.—probably the decrease to the United Kingdom and the increase to Canada are due to a direct shipment from Germany to Canada, as the difference in the amounts is very similar. The import of photographic dry plates rose not inconsiderably, viz., from 2,800 to 3,500 dz. ; of this total over 3,000 dz. came from the United Kingdom. It is not surprising that under these circumstances German makers should be clamouring for a customs duty to protect them.

Concerning the glass industry, the impression of the Munich Exhibition was disappointing in opposition to the impression produced by the exhibits of potteries. The technical schools connected with this industry have not yet risen to a similar high standard. The German market thus offers any foreign goods of a high class excellent opportunities—more especially cut glass of British origin has become a stock in trade of the highest class shops, and finds ready customers among the richer classes.

GLASS AND GLASS WARES.

	Country.	Imports. 1911. Dz.	Imports. 1912. Dz.	Exports. 1911. Dz.	Exports. 1912. Dz.
Hollow glass, neither moulded nor cut—					
Natural colour ...	United Kingdom	—	—	212,056	240,703
	South Africa ...	—	—	22,647	31,967
	India	—	—	18,105	26,267
	Australia ...	—	—	11,591	24,060
	New Zealand ...	—	—	14,791	12,507
White	United Kingdom	—	—	70,871	80,583
Hollow glass, moulded, white or natural ...	United Kingdom	—	—	63,147	52,517
	India	—	—	7,399	10,817
Other hollow glass, moulded or cut	United Kingdom	—	—	11,009	13,740
Plate glass	Canada	—	—	829	2,727
	United Kingdom	—	—	18,388	15,092
Dry plates	United Kingdom	2,418	3,035	—	—
Instruments of glass in combination with other materials	United Kingdom	—	—	—	2,346

Imports to the Society Islands during 1911 (in brackets) and 1912 included the following values :—Pottery, France, £330 (£339) ; U.K., £86 (£14) ; Germany, £41 (£91) ; U.S.A., £87 (£93) ; Australasia, £181 (£46) ; other countries, £34 (£48) ; total, £759 (£631). Glassware, France, £146 (£86) ; U.K., £7 (£18) ; Germany, £78 (£31) ; U.S.A., £445 (£457) ; Australasia, £218 (£201) ; other countries, £19 (£28) ; total, £913 (£821).

THE LIMOGES PORCELAIN INDUSTRY.

VERY different from the meagre British Consular Reports is the full and detailed information recently supplied by the American Vice-Consul at Limoges. He says :—

Limoges has a world-wide reputation for its china. The industry has been carried on in this city for over a century. The excellence of its ware, its hardness, fineness of texture, perfect vitrification, and translucency, make it unsurpassed in the estimation of connoisseurs. Other factors that have contributed to establish this reputation are the artistic attainments of the Limoges workingmen, of whom there are three generations who have been trained to this particular labour ; nor should the efforts of the Limoges manufacturers to introduce their product in all civilised countries be overlooked. The china industry occupies first place among the varied industries of Limoges, both from the standpoint of the number of workingmen employed and the value of the production of the factories.

To gain a clear and comprehensive idea of the china industry as a whole, one must study the various processes, which may properly be referred to in the following order :— (1) Raw materials ; kaolin, &c. ; (2) machinery for making the shapes ; (3) firing ; (4) decoration.

Kaolin is the most important raw product entering into the manufacture of hard china. The kaolin deposits are situated at Coussac-Bonneval (in the consular district of Limoges), and have probably the purest clay in the world ; the most important of these kaolin deposits extend over 2,500 acres. They are found in irregular strata, at variable distances from the surface. The methods employed in mining are most primitive and crude ; the deposits are open, and the extracted clay is taken from the pits in small wooden baskets, which are carried by women and girls on their heads to the washing shed, where the kaolin is sorted and washed. The national factory at Sèvres, as well as manufactories in other European countries, use this clay to a certain extent. Only $630 worth of kaolin was shipped from the jurisdiction of this Consulate to the United States in the last two calendar years. The annual production of kaolin in the department of Haute Vienne, which supplies the Limoges factories, is about 12,000 metric tons, valued at about 800,000fr. ($154,400).

According to the French census of 1901 the quarries employed about 840 people. The average wage per day is 2.50 fr. (48.25 cents) for men and 1 to 1.50 fr. (19·3 to 28.9 cents) for women and children. The average prices of the raw material on the Limoges market are :— Argillous (clayey) kaolin, 10 to 12 fr. per 100 kilos ($0.875 to $1.05 per 100 lbs. ; flinty (pebbly) kaolin, 5 to 6 fr. per 100 kilos ($0.438 to $0.525 per 100 lbs. ; decanted kaolin, 3.50 to 6 fr. per 100 kilos $0.31 to $0.525 per 100 lbs.) ; flint and stone, 2 to 3.50 fr. per 100 kilos ($0.175 to $0.31 per 100 lbs.). There are about 30 quarries in operation.

Before the kaolin is delivered at the china factory it is washed and ground and all impurities removed. The mills for washing and grinding the kaolin are nearly all situated on the River Vienne and its tributaries in the vicinity of Limoges. The number of clay mills was 31 in 1906. They operate 1,100 pairs of small millstones, one dozen of large ones, and 12 to 15 "Alsing grinders." The power required to operate them is over 1,000 horse power. The number of mills does not seem very large, but certain among them operate as many as 80 pairs of grinders, while others operate only from 14 to 16. The census of 1901 places the number of workers in the clay mills of the department of Haute Vienne at 590, of whom 13 were women. The average daily wage in 1910 was 2.65 fr. (51.15 cents.). The increasing demand for clay has brought about improvements in the machinery of these mills. Cleanliness in handling the clay has also been an important factor in bringing about these improvements. The old presses with such attachments have been replaced by filter presses provided with crushing apparatus, electro-magnets, and rotary sieves. Foot presses have been replaced by machine power. The production of clays in these mills amounts to about 17,000 metric tons, valued at 1,700,000 fr. ($328,100). The market price per 100 kilos in Limoges varies from 8 to 12 fr. ($0.70 to $1.05) per 100 lbs., according to the grade of clay desired. Practically the entire output of these mills goes to the china factories in Limoges. Only about one tenth is shipped to other parts of France and to Belgium, Spain, Italy, Russia, and a small amount to Germany.

After the reception of the clay at the china factories it is again washed and a pump carries the liquid up into a receiver, where it passes between two electro-magnets to remove every particle of iron that might remain in the clay ; this mineral discolours the china, often forming black spots, so much objected to. The liquid is then pumped into a hydraulic press, where the superfluous water is forced out of the clay. The press is emptied on a platform covered with zinc, over which run heavy rollers. Great care is taken to prevent the clay from touching iron, the cast iron roller cylinders being incased in zinc. When the clay has finished its course under these rollers it is placed on another zinc-covered disc and worked by similar cylinders. These mixers give a plasticity and evenness to the clay that no other manipulator has been able to impart. The clay is now ready for the potter.

All the jiggering is done by machinery. The plaster mould by which the clay is partially shaped is placed upon a jigger, or revolving disc, which is thrown in and out of gear by the foot. The knife gauge, which assists in shaping the clay, can be so arranged that the same machine can make several kinds of ware. This machine economises hand labour and contributes very much to the rapidity with which work can be done. There are machines for making plates, saucers and platters. One machine reduces the clay to the desired thickness, and the plate is finished on still another machine. One man usually works both of these. He make just as many plates as he can change the moulds necessary for each one of them. These machines work automatically. Steam power is generally employed. They work so evenly that there is no danger of imperfections in the articles made. There are two machines for making hollow ware, such as cups, tureens, bowls and deep dishes of all kinds. In one of these are two pedals, one regulating the pressure made on the clay and the other throwing the machines in and out of gear. The gauge is so arranged as to fit into both hollow and curved ware. There is not only a down motion, but a side motion to the gauge, which makes it conform to the irregularities of the mould. This machine has reduced the cost of manufacturing tureens, salad dishes, bowls, &c. An ingenious contrivance is used in making oblong platters, &c. The jigger has one long motion for the eliptical shape of dishes. The quantity of articles possible to make on a machine is very great. One workman can turn off as many dishes in a given time as 20 could by hand, and the work is better done. The revolutions in jiggering can be regulated by a machine. It is very often necessary to accelerate the revolutions of a machine in making certain articles ; the regulator accomplishes this purpose. Heretofore the trouble with cup-making machines has been their rigidity. M. Faure has overcome this trouble in the improved cup machine, which has not only the down motion, but the gradual side motion which corresponds to the movement of the human hand.

The efforts of the Limoges manufacturers have long been directed to improvements in the firing of china with a view to reduce the cost of fuel, which amounts to about 10 to 12 per cent. in the price of white china. The kilns now in use are known as the down-shaft furnace; they are built in two stories. The coal for firing is of a smokeless, long-flame variety. Wood is used only in firing the "mouffles" and in the finest grades of porcelain. The upper story of a kiln is charged with glazed ware, as it requires the lowest temperature, and the lower is filled with bisque. The larger kilns operated here have a capacity of about 149 cubic meters (5,260 cubic ft.). During 1910 the 128 kilns in operation had a capacity of about 11,873 cubic meters (419,280 cubic feet). The number of firings was 2,823, which required a consumption of 8.000 metric tons of coal and 1,297 steres (45,802 cubic feet) of wood. The average salary of kiln firemen was 05 fr. ($39.56) per month and that of kiln men 25 to 40 fr. ($4.83 to $7.72) per week of 65 working hours. The amount of white china fired per cubic meter of kiln is considered to be worth from 35 to 40 fr. ($6.75 to $7.72). The total amount of white china produced at the present time is estimated at from 12,000,000 to 14,000,000 fr. ($2,316,000 to $2,702,000).

The decoration of china has been reduced to an art in Limoges. The processes of lithographing and decalcomania have replaced all hand painting, except for rich decorations and special orders. Another process is that of applying soft underglaze colours so as to produce blue effects, and it is probable that very soon the leading styles of the best classes of goods will be decorated in this manner. The large manufacturers make their own decalcomania sheets, work out their designs, and control their decorations. They employ girls to apply the decalcomania lithographs on the china. After the paper has been removed therefrom the articles are fired in the "mouffles" to set the colours. The continuous mouffles are adopted in every large factory here; these are a great saving of time, labour and fuel over the old-fashioned method of firing decorations. The work is performed much quicker, and the temperature of the mouffles may be regulated to a nicety. There are in Limoges 151 mouffles, of which 113 are still fired with wood and 38 with coal. There are also 38 old-fashioned ones (the shape of a very small one-story kiln) still in operation. The decoration of china increases the value of the white by about 6,000,0000 fr. ($1,158,000), which brings the annual output of white and decorated china to about 20,000,000 fr. ($3,860,000). In 1908 there were 41 decorating shops in Limoges that did not manufacture their own white china, in addition to the 34 manufacturers of white china who had their own decorating. The lowest salary in a decorating shop is 2 fr. ($0.386) for women and the highest for men, 10 fr. ($1.93) per day.

As heretofore stated, the annual production of china in Limoges amounts to about 20,000,000 fr. The disposition of the output is gradually changing. Until 1906 nearly two-thirds of the entire output was shipped to the United States. Since then the exports to the United States have been gradually falling off until now they amount to about 42 per cent. of the total production. This decrease has been offset to a certain extent by the development of the Canadian market, to which the Limoges manufacturers are now giving a great deal of attention. Next to the United States, England and South America are the best customers for Limoges china. The exports to the United States since 1906 have been as follows:—

1906, $1,802,108; 1907, $1,767,512; 1908, $1,445,561; 1909, $1,495,926; 1910, $1,560,142; 1911, $1,470,589; 1912, $1,405,320.

Empire Notes.

The Earthenware Import of Rangoon was valued at 1,332,000 rupees in the twelve months ending March 31, 1913, as against 1,191,000 rupees for the preceding year.

Indian Imports during the year ending March 31, 1913, included earthenware and porcelain to the value of Rs. 5,431,000 (increase 2·2 per cent.), and glass and glassware to the value of Rs. 17,534,000 (increase 13·6 per cent.).

Imports to the Straits Settlements during 1912 (with the figures for 1911 in brackets for comparison) included:—Earthenware, crockery, and porcelain, from United Kingdom ($228,000), $234,000; from Continent of Europe ($475,000), $558,000. Glassware, including bottles, United Kingdom ($229,000), $248,000; Continent ($322,000), $432,000. The value of the dollar is 2s. 4d.

Canadian Trade Inquiries.—A Toronto firm desires to import supplies of common building bricks (8½ in. by 2½ in. by 4 in., weight 4 lbs.), and asks for quotations for 1,000 bricks, f.o.b. United Kingdom port. Ocean freight charges to be stated in addition.——A Vancouver correspondent desires to act as agent for United Kingdom manufacturers of china tea sets, toilet sets, dinner sets and similar wares. For further information, application should be made to the High Commissioner for Canada, 17, Victoria-street, S.W., mentioning THE POTTERY GAZETTE.

Canadian Duties on Fire Bricks.—With reference to the notice which appeared in our last issue notifying a Customs decision given under Appraisers' Bulletin No. 653 respecting bricks imported into Canada, the Board of Trade have now received, from the Canadian Department of Customs, copy of a further Bulletin (No. 660), dated June 10, 1913, giving a Customs decision regarding the duty leviable on silica fire bricks imported into the Dominion, as follows:—Silica brick for use as fire brick (9 in. by 4½ in. by 2¼ in.) and valued at over $16 per thousand at the place where laden for export to Canada, being of a class or kind not made in Canada, may be imported free of duty. It is, however, provided that silica brick admitted free under this provision must contain over 90 per cent. silica.

Kaolin in India.—In the General Report of the Geological Survey of India for 1912, just issued, Mr. Heron records the presence in Jaipur State of deposits of kaolin which may possibly be of value. One and a quarter miles south-east of Rasnu (26° 41′; 76° 37′) a long and spacious tunnel has been driven along the strike of a bed of kaolin which runs midway in the ridge of Alwar quartzites and is about 20 yards wide, white but rather impure, banded with quartzite. There is evidently a very large quantity available. It has been quarried for local uses only, such as whitewashing, &c. Kaolin is also dug from the soft argillaceous and talcose zone near the base of the Alwars at the north end of the Lalso hills, chiefly near Daroli (26° 55′; 76° 58′). There are two beds separated by quartzite; the upper one provides a white and fairly pure clay, slightly mottled with pale purple and pink.

Belgian Tariff on Shop-Window Bottles.—The Board of Trade are in receipt, through the Foreign Office, of copy of a recent Circular of the Belgian Ministry of Finance providing that so-called "shop-window bottles" (bouteilles d'étalage), filled with coloured water so as to look like oil, are dutiable at the rate of 2 frs. per 100 kilogs., under the heading in the Belgian Customs Tariff for "bottles, &c., of white or half-white glass."

THE UNITED STATES GLASS INDUSTRY.

THE latest British Consular Report from Pittsburg supplies the following paragraphs :—

Glass and Glassware.—The year 1912 has been a fairly good one for glass manufacturers in the Pittsburg district, as in other sections of the United States, although some departments of the industry have suffered by reason of over-production and low prices, which is to be attributed to lack of organisation among the producers. The production of machine-made as against hand-made goods is steadily increasing, especially in the case of window glass and bottles, about one-half of the annual output of these articles now being machine-made, and the most progressive hand manufacturers are making an organised effort to secure a dependable machine equipment. The demand in all lines has been up to the average in former years, and the coming year promises to be a more profitable one for manufacturers generally than any during the past decade.

Window Glass.—The estimated total production of window glass in the United States is about 7,000,000 boxes annually, of which about one-half is produced by mechanical methods, leaving about from 3,500,000 to 4,000,000 boxes produced by hand. About 55 per cent. of this hand-made glass is manufactured in the Pittsburg district, including Pennsylvania and West Virginia, the remainder being produced in the States of Ohio, Indiana, Kansas, Oklahoma, Texas and Louisiana. West Virginia is producing more window glass at present than any other State, owing to the plentiful supply of natural gas as fuel, the estimated production in that State during the period from September, 1911, until June, 1912, which is termed the "blast" period, being about 1,100,000 boxes. The year 1911 closed with the window glass industry in a more or less demoralised condition, caused by over-production and over-stocking of the market, following the dissolution of the Imperial Window Glass Co. in the fall of 1910, at the instance of the Federal Department of Justice at Washington. Prices were carried to the lowest point ever reached, and the wages of skilled workmen fell to the basis of common unskilled labour. Early in 1912, however, efforts were made to adjust supply to demand. Wage advances, aggregating more than 60 per cent., were conceded between December, 1911, and October, 1912, and all the hand factories in the country were closed down from May until October. In consequence of this and of advance in the cost of raw materials, the price of window glass was advanced, manufacturers' stocks were cleaned up and the industry enters upon the year 1913 under more favourable conditions than for a number of years past.

Plate Glass.—The total production of plate glass in the Pittsburg district during the year 1912 was about 31,000,000 sq. ft., with a value at factory of $8,370,000 (£1,674,000), as compared with 25,000,000 sq. ft. in 1911, valued at $6,500,000 (£1,300,000). This increase in production is to be largely accounted for by the increased demand for smaller sizes, due to the requirements of the constantly expanding automobile industry. Less plate glass has been imported during the past year than for several years on account of the domestic factories being able to supply even the increased demand.

Bottles.—Factories generally have operated steadily during the year 1912 and are at present doing a satisfactory business, although many of the hand blowers have been rendered idle by the adoption of machine methods of production. The outlook on the whole in this department of the glass industry, which is the largest revenue producer of any single branch of the trade, is stated by competent authorities to be altogether favourable.

Tableware.—Prices ruled low in this line of goods during the year 1912, abnormally so on some items, but the prospects are that higher values will be established during the coming year. Factories generally operated to capacity, with the usual midsummer shut-down restricted to barely enough time to put the factories in good working condition.

Lamp Glasses.—The increasing use of electricity for lighting purposes has very much stimulated this branch of the glass industry, and the factories making a speciality of lighting goods had a satisfactory business during the year.

Pottery Colours in Japan.—A British Consular Report states that the imports into Japan of gold, silver, and platinum liquid, which is largely used in the porcelain industry, were more than doubled last year, and are now 60,000 lbs., worth £28,200. The advance is all credited to Germany.

Bauxite Bricks for Furnace Linings.—The use of bauxite in the manufacture of bauxite brick for furnace linings has long been considered. It has been found by experiment that when the impure forms containing considerable iron oxide are exposed to intense heat the bauxite is converted into a solid mass of emery of such extreme hardness that it can barely be cut by steel tools, and that it resists chemical, thermal, and mechanical action to a marked degree. The purer the bauxite used the more refractory it is, and the addition of bauxite free from iron oxide to refractory clays increases their alumina content and at the same time their refractoriness. The high cost of the raw material, as well as of the manufacture of the bricks, makes the ultimate cost of bauxite brick high compared with the cost of silica or fireclay brick. Recent applications of bauxite in brick are in the lining of rotary cement kilns, lead-refining furnaces, and basic open-hearth steel furnaces, where a brick high in alumina and low in silica is required. Recent tests seem to show that bauxite brick are suitable for basic open-hearth furnaces, provided they can be made with less than 12 per cent. silica ; and experiments show that bricks with this low proportion of silica are as good as magnesite brick. In preparing bauxite for use in kiln or furnace linings, the crude ore is first washed to remove some of the free silica and clayey impurities. It is next calcined at a temperature of 2,500 deg. F., during which process it gives off its water of constitution, amounting to about 30 per cent. of the raw ore, and undergoes great shrinkage in the meantime. In the calcination of bauxite according to modern methods rotary kilns are employed in which oil, gas, or powdered coal are used as fuel. The kilns should preferably be installed at the mines in order to save the cost of transportation of the large content of water present in the crude ore. It has been observed that the bauxite shrinks very little below a temperature of 2,390 deg. F. Between this temperature and 2,500 deg. F. the greatest shrinkage takes place. Accordingly, the lowest temperature at which bauxite should be calcined is about 2,500 deg. F. The calcined mineral may be bonded with fireclay, sodium silicate, or lime. As little as 4 per cent of plastic fireclay may be used as a bond in handmade brick. When bonded with lime the brick becomes quite hard a few hours after making, so hard that they will not take the impression of the finger nail. This setting or hardening is probably due to a reaction between the lime and the free silica whereby calcium silicate is formed, and the reaction may be analogous to that involved in the setting of silica brick when bonded with lime. After a careful drying the brick is burned in down-draft kilns at a high temperature, as a result of which process they become hard and tough. A brick 9 by $2\frac{1}{2}$ by $4\frac{1}{2}$ ins. weighs $7\frac{1}{2}$ lbs., and stands a crushing test of 10,000 lbs. per square inch.

Foreign Notes.

China clay to the weight of 19,030 tons was imported into Rouen last year.

The Crockery Import of Costa Rica was valued last year at £1,980, an increase of £483.

Mr. W. S. Pitcairn, New York agent for the Royal Doulton Potteries, has removed from Murray-street to 104, Fifth-avenue.

Japanese Exports of porcelain and earthenware during the first quarter of 1913 were valued at £139,300. The trade shows a steady growth.

Hammersley & Co., of Alsager Pottery, Longton, have appointed Mr. W. S. Pitcairn, of 104, Fifth-avenue, New York City, as their New York agent.

Window-Glass, plain or fluted, bevelled, is dutiable at 20 frs. per 100 kilogs. gross, on importation into Switzerland, according to a recent Customs decision.

China Clay Import of Portland, Maine.—The direct line of steamers bringing china clay from Fowey, England, maintained a regular service last year, importing 34,341 tons, valued at £41,174.

Glass Bottles, with an inscription placed thereon by the use of a plaster mould and a gelatinous substanee, are dutiable as glass bottles printed in any manner at 60 per cent. ad. val. on importation into the United States, according to a recent Customs decision.

New Finnish Glass Works.—It is stated that a group of Finnish industrialists in conjunction with some St. Petersburg capitalists are forming a share company to establish a glass factory at Puchtula, about 5 kilometres from Teryuk. About 400,000 Finnish marks are subscribed, and building will begin in the autumn.

The Saxon Porcelain Industry.—The Royal Porcelain Factory (Koenigliche Porzellanmanufaktur) at Meissen was so busily employed in 1912 that the number of hands had to be considerably increased, and important extensions were also made in the plant. So far the exports to the United States of America have shown no signs of reanimation. Due to the briskness of business, the hands were enabled to make good money, but as in Germany one has to pay eighteen pence extra taxes for every additional seventeen pence earned, they were, in the end, not much better off. The porcelain factories at Potschappel and Freiberg also report a very busy year, and here, also, the works have in part had to be enlarged. These latter concerns report a slackening of business with Great Britain, but better orders have been secured from America. Owing to severe competition it has not been possible to raise sale prices. Payments from Italy were specially unsatisfactory throughout the year. One firm was considerably hampered in its business and suffered some loss through a strike. A large Dresden china painting and retailing concern speaks unfavourably of business, as, owing to the Presidential election, their chief market (America) proved a poor buyer and trade was greatly disturbed in consequence. The home demand was also poor, whilst business with European lands in general was quite disturbed owing to the Balkan muddle, which still continues to hang like a threatening cloud over trade and industry; consequently some hands had to be dismissed.

Glassware in Columbia.—A German official report from Bogota states that tumblers formerly came exclusively from Germany and Bohemia, whereas at the present time they come chiefly from the United States of Ameriea, because they can be got thence much cheaper. However, as it has been found that with American packing there is a large percentage of breakage, orders are again beginning to find their way back to Germany. That country also does best in the finer and thinner sorts of sherry, port, brandy, and similar glasses. In these Belgium also does a trade, but the very finest kinds come from France. Of late several North American firms have begun to circulate Spanish catalogues throughout Columbia, with a view to pushing trade in fine American glassware. In ordinary glassware (cheap to medium sorts), and more especially in tumbler, beer, wine, brandy and cognac glasses of the pressed and blown type, Columbian industry is itself already very capable, and is represented by the following firms:—Fabrica Fenicia, Bogota; a factory entitled Vidriera de Villa; Greiffenstein & Co., Caldas, near Melilla; and a small concern at Baranquilla. Crystal glass comes from Germany and Bohemia, French trade being practically nil. There is hardly any sale at all for expensive glassware de luxe in Columbia; the actual goods which are sold as French have never seen France at all. Window glass is almost entirely Belgian, but endeavours are now being made to procure this line from the United States. Some competition is now arising from the above-mentioned Fenicia factory at Bogota; however, that glass is very brittle, and is reported to suffer a deal from the climate and sudden changes in temperature. So far this is the only factory making window glass in Columbia, and as foreign makers are four to five times dearer, it is meeting with a fair demand. Mirror glass, ready cut and quicksilvered, is imported from Germany, France, and Italy. Beer bottles are no longer imported; they are either mostly made in Columbia itself, or else empty English (especially from Tennent's brewery in Glasgow), German, and Bavarian beer and mineral water bottles are bought up in the country itself. All glass, china, and crockeryware for Columbia must be packed in massive cases to avoid breakage.

Obituary.

MR. WILLIAM COTTRELL, Aged 78.

BY the much regretted death of Mr. William Cottrell, on July 17, Bristol is robbed of probably its oldest member of the china and glass trades, and, moreover, a prominent citizen. For 55 years the deceased gentleman controlled an extensive china and glass trade at 22, Barrs-street, in which street he was born. The late Mr. Cottrell was an active citizen, and a member of the City Council, representing the St. James' Ward at the time of his death—a public position which he has held for the last 22 years. In the course of his civic duties he served on the Burial Board, the Old Age Pensions Committee, and the Sanitary and Education Committees, regularly attending the various meetings. He also served as a Guardian of the Poor. As a Churchman he was a sidesman and senior churchwarden at St. Bartholomew's. Although advancing in age, Mr. Cottrell continued to apply himself to his business until the last, and within a fortnight of his death, which took place suddenly, was to be found at his business premises. That the deceased gentleman was very highly respected was evinced by the impressive funeral which took place on July 21, at St. Bartholomew's Church. The coffin, which was borne to the Church in an open Washington car, was followed by the coach of the Lord Mayor and a distinguished cortège. The Rev. F. Sumner during the service paid an eloquent tribute to the deceased's memory. In the May issue of this journal will be found a photograph of the late Mr. Cottrell, with an account of the business over whose fortunes he presided. Our condolences are offered to the relatives who are left to mourn him.

A STUDY IN UNDERGLAZE COLOURS.*

THE object of this investigation was to determine the most insoluble and non-volatile underglaze colour fritt composition. Of the literature on this subject I believe we only have Roesler's statement, quoted by Seger, that a compound of the spinel composition is the most resistent to the dissolving action of the glaze. The spinel proper is $MgO.Al_2O_3$. Seger advised the compounding of underglaze colours, wherever possible, according to the spinel formula: either a metallic monoxide with the sesquioxide of alumina, or a metallic monoxide with a metallic sesquioxide. The work here was undertaken to verify this.

In order to cover the field as systematically as possible, it was decided to compound the oxides, and wherever desirable, the phosphates of the six most commonly used metals, with four inert or refractory elements in five different proportions, one being according to the spinel formula and with two proportions above and two proportions below the spinel. These colour fritts were to be calcined at a high heat, ground and washed, then compounded with 20 per cent., by weight, of the glaze to be used over them, and then fired under glaze and on biscuit under two conditions, the first being the American practice of high biscuit and low glost, and the second being the European practice of low biscuit and high glost.

Six oxides and three phosphates were used, designated by letter from A to J inclusive. Four refractory elements or substances were used, designated by the Roman numerals I to IV inclusive; and the five proportions between colouring oxide, or phosphate, and the refractory substances, by the Arabic numerals 1 to 5 inclusive, as follows:—

1·0 R. O.
- 0·50 eqv. refractory substance (1)
- 0·75 eqv. refractory substance (2)
- 1·00 eqv. refractory substance (3)
- 1·25 eqv. refractory substance (4)
- 1·50 eqv. refractory substance (5)

The following table, No. 1, gives the list of oxides or phosphates used, their designating letter and their chemical formula. Table No. 2 gives the list of refractory substances used and the data for each as in Table No. 1.

TABLE No 1.—METALLIC OXIDES AND PHOSPHATES.

Letter.	Colouring Oxide or Phosphate.	Formula.
A	Chromium oxide	Cr_2O_3
B	Chromium phosphate	$Cr_2(PO_4)_2$
C	Cobalt oxide	Co_3O_4
D	Cobalt phosphate	$Co_3(PO_4)_2 + 2(H_2O)$
E	Copper oxide	CuO
F.....	Ferric oxide	Fe_2O_3
G	Ferric phosphate ...	$Fe_2(PO_4)_2 + 8(H_2O)$
H	Manganese oxide	MnO_2
J	Uranium oxide (yellow)	$Na_2U_2O_7 + 6(H_2O)$

TABLE HO. 2.—INERT OR REFRACTORY SUBSTANCES.

Number.	Substance.	Formula.
I	Aluminium oxide	Al_2O_3
II	Silica	SiO_2
III	Aluminium phosphate	$(Al_2PO_4)_2$
IV	Kaolin	$Al_2O_3.2SiO_2.2H_2O$

In order to make this plan of compounding more comprehensive, the following table of actual weights is given for chromium oxide, as an example.

* By Earl T. Montgomery. Reprinted from Vol. XII. of the Proceedings of the American Ceramic Society.

A

	1	2	3	4	5
I	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3
	51 Al_2O_3	76·5 Al_2O_3	102 Al_2O_3	127·5 Al_2O_3	153 Al_2O_3
II	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3
	30 SiO_2	45 SiO_2	60 SiO_2	75 SiO_2	90 SiO_2
III	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3
	122 $Al_2(PO_4)_2$	183 $Al_2(PO_4)_2$	244 $Al_2(PO_4)_2$	305 $Al_2(PO_4)_2$	366 $Al_2(PO_4)_2$
IV	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3	152 Cr_2O_3
	129 Kaolin	193·5 Kaolin	258 Kaolin	322·5 Kaolin	387 Kaolin

As a final distinguishing mark, the letters F and R are added, to designate the type of glaze used over the given trial and incidentally the biscuit and glost heat treatment of that trial. An example would be thus:—A—I—1—F and A—I—1—R. F stands for fritted glaze and, therefore, for the American practice of high biscuit and low glost. R stands for raw porcelain glaze and, therefore, for the European practice of low biscuit and high glost. As each trial piece was dipped only half over with glaze, the effect on biscuit and underglaze is, of course, given on the same trial and no mark is needed to designate the two conditions.

The body used for the trial pieces was a good low feldspar porcelain, of the following composition:—

Eng. Ball clay.....	15·0	per cent.
Eng. china clay	25·0	,, ,,
Flint.....	43·5	,, ,,
Feldspar	15·0	,, ,,
Magnesium carbonate.....	1·5	,, ,,
	100·0	,, ,,

It was quite translucent.

The trials were jiggered discs of about 3·5 in. fired diameter. This shape was decided on so that the colours could be put on in concentric rings, on a whirler, by means of a soft brush. Half of the trials were biscuited at cone 10 for the hard biscuit, and half at cone 05 for the soft biscuit.

The fritted glaze used for the high biscuit and low glost trials was the glaze given by Mr. Ernest Mayer in Vol. I., Trans. A.C.S., as follows:—

$$\left.\begin{matrix}0{\cdot}0640\ K_2O \\ 0{\cdot}1920\ Na_2O \\ 0{\cdot}4903\ CaO \\ 0{\cdot}2534\ PbO\end{matrix}\right\} \left.\begin{matrix}0{\cdot}2811\ Al_2O_3 \\ 0{\cdot}3845\ B_2O_3\end{matrix}\right\} 2{\cdot}8070\ SiO_2$$

The trials over which this glaze was used were fired in the glost burn to cone 02, this being the heat at which the glaze matured in the test kiln.

The raw porcelain glaze used for the low biscuit and high glost trials was the following typical porcelain glaze:

$$\left.\begin{matrix}0{\cdot}3\ K_2O \\ 0{\cdot}7\ CaO\end{matrix}\right\} 0{\cdot}4\ Al_2O_3 \left\{ 3.825\ SiO_2\right.$$

The trials over which this glaze was used were fired in the glost burn to cone 12.

The colour fritts were thoroughly wet-ground in an agate mortar. They were then dried and calcined at cone 10 in covered, biscuit-porcelain crucibles. The calcined colour fritts were finely ground, thoroughly washed with water, dried, compounded with 20 per cent., by weight, of the glaze, and again intimately wet-ground. The colours were then ready for use.

Using 9 colouring oxides or phosphates, and each being compounded in 20 different proportions with a refractory substance, give 180 colour fritts which were prepared and calcined. All of the colour fritts, which stood the calcining heat of cone 10 without fusing or becoming too hard for

use as colours, were prepared as given above and applied as follows :—

The five combinations of each colour with each one of the refractory substances were applied in five concentric circles on a hard biscuit disc for the low glost burn and also on a soft biscuit disc for the high glost burn. One trial would then be marked thus :—A—I—1 to 5—F. and the other A—I—1 to 5—R, the numerals 1, 2, 3, 4 and 5, reading on the trial from the outside circle of colour to the central one.

STATEMENT OF CONDITION OF COLOUR FRITTS AFTER CALCINING AT CONE 10.

Mark.	Condition of fritt.	Colour.
A I—1 to 5	Fine soft powder.	Bright light green.
A II—1 to 5	Soft powder. Little harder than A-I.	Bright light green.
A III—1 to 5	Soft sintered powder. Harder from 1 toward 5.	Rich dark green.
A IV—1 to 5	Hard cake. Scratches with difficulty with knife.	Light green.
B I—1 to 5	Fairly hard cake.	Dark bluish green.
B II—1 to 5	Sintered powder. Much softer than B-I. Softer 1 toward 5.	Bright dark green.
B III—1 to 5	Hard vitreous globules.	Dark green.
B IV—1 to 5	Hard vitreous crackled cake.	Light grass-green.
C I—1 to 5	Soft sintered cake. Softer 1 to 5.	Fine navy-blue.
C II—1 to 5	Hard sintered cake.	Salmon-pink.
C III—1 to 5	Hard vitreous fusion.	Rich purple.
C IV—1 to 5	Hard vitreous crackled cake.	Bluish gun-metal colour.
D I—1 to 5	Hard vitreous bubbled fusion to hard crackled cake.	Deep purple.
D II—1 to 5	Hard crackled cake to hard sintered cake. Softer than D-I.	Old rose.
D III—1 to 5	Hard vitreous globules.	Purple.
D IV—1 to 5	Hard vitreous fusion.	Gun-metal.
E I—1 to 5	Hard sintered crackled cake.	Metallic grey.
E II—1 to 5	Hard vitreous fusion to hard sintered cake.	Greenish grey.
E III—1 to 5	Hard vitreous fusion.	Metallic grey (crystallised).
E IV—1 to 5	Hard vitreous crackled cake.	Greenish grey.
F I—1 to 5	Hard vitreous cake to soft sintered cake.	Reddish brown.
F II—1 to 5	Hard vitreous fusion to hard crackled cake.	Purplish brown
F III—1 to 5	Hard vitreous fusion.	Metallic grey (crys allised)
F IV—1 to 5	Hard vitreous globules.	Greenish black.
G I—1 to 5	Hard vitreous cake to fairly hard crackled cake.	Reddish brown.
G II—1 to 5	Hard vitreous fusion.	Reddish brown.
G III—1 to 5	Hard vitreous fusion.	Greenish brown.
G IV—1 to 5	Hard vitreous fusion.	Brown.
H I—1 to 5	Hard crackled cake to sintered cake.	Brown.
H II—1 to 5	Hard vitreous fusion.	Brownish grey.
H III—1 to 5	Hard vitreous fusion to bubbled fusion.	Light brown.
H IV—1 to 5	Hard vitreous fusion to hard crackled cake.	Dirty dark brown.
J I—1 to 5	Hard sintered cake. Softer 1 to 5.	Yellowish grey.
J II—1 to 5	Hard vitreous globules.	Yellowish grey.
J III—1 to 5	Hard vitreous globules.	Yellowish green.
J IV—1 to 5	Hard crackled cake.	Yellowish black.

Series A.—None of these colours flowed under the glaze at either heat. No volatilisation was noticeable. Fine green colours. Series B.—None of these colours, which gave workable colour fritts, flowed under the glaze at either heat. No volatilisation was noticeable. Fine green colours. Series C.—C–I and C–II, which gave workable colour fritts, showed some tendency to flow at both heats. No volatilisation was noticeable. Fine dark blue colours. Series D.—D–I and D–II, which gave workable colour fritts, did not flow at either heat. No volatilisation was noticeable. Fine dark blue colours. Series E.—E–I and E–II, which gave workable colour fritts, gave a flowed green at the low heat and a black colour widely disseminated through the glaze at the high heat. Volatilisation was noticeable. Series F.—F–I and F–II, which gave workable colour fritts, did not flow at either heat. Volatilisation not noticeable. Good yellow at low heat and a dark brown colour at the high heat. Series G.—G–I, which was a workable colour fritt, did not flow at either heat. Volatilisation not noticeable. Good brown colour. Series H.—H–I, which was a workable colour fritt, did not blow at either heat. Volatilisation noticeable at high heat but not at low. Typical manganese-brown at both heats, but very light at high heat, due to volatilisation. Series J.—J–I, which was a workable colour fritt, did not flow at either heat. No volatilisation noticeable, but colour was not good. Greyish yellow-brown.

In regard to the relative merits of the four refractory substances used to produce insoluble and non-volatile colour fritts, we see that, in most all cases, Al_2O_3 is the best refractory. An exception is noted in case of the phosphates of the metals, in which cases SiO_2 gives the most refractory colour fritt and the most insoluble colour. Where the colour itself is refractory, as in the case of Cr_2O_3, any of the refractories can be used. In many cases, good workable colour fritts were obtained with both Al_2O_3 and SiO_2. The most refractory colour fritts gave, in all cases, the most insoluble colours.

No distinction could be made, in the appearance of the colour, between the mixtures made in the five different proportions of the refractory substance and colourant. The workable colour fritts appeared to be equally insoluble and equal in shade of colour for all of the proportions used. This being true, it is possible in some cases to get a more refractory colour fritt by going above the spinel ratio in compounding the fritt.

Volatilisation of a colour seems to be a function of the given colouring oxide or phosphate and is not much affected by compounding and calcining with a refractory substance. Of course, in this study, this statement could not be proven quantitatively and is only given as a suggestion.

As a general rule, the oxides of the metals seem to give the most insoluble and best working colours. An exception was noted in the case of cobalt where the phosphate gave the most insoluble colour.

Colour fritts calcined at cone 10 seem to stand either heat treatment equally well in the glost burn, without being affected in regard to solubility.

In closing, the writer desires to express his deep appreciation of the many helpful suggestions given during the progress of the work by Prof. A. V. Bleininger, Director of the Department of Ceramic Engineering, University of Illinois, and of the granting of the necessary funds of the department.

The Pottery Export of Austria-Hungary showed a substantial increase for the first quarter of the current year. The total weight was 19,840·4 metric tons, including 4,108·7 m. tons classed as porcelain.

PORCELAIN GLAZES.[1]

(*Continued from page* 297.)

SUMMARY.

IN the following charts will be found letters denoting comparative gloss, opacity, and crazing. The symbols used are :—

Dr represents dry.

Du represents dull.

SG—, SG, SG +, G—, G, represent successive degrees of glossiness from a slight sheen to good bright glossy surface.

T, T—, SO—, SO, SO +, O—, O, O + represent successive degrees of opaqueness ranging from transparency to a very good white enamel.

C represents crazing.

OPAQUE GLOSSY GLAZES.—The rectangular spaces marked off by dotted lines are the areas of best opaque glossy glazes at each of the heat treatments.

CONE 7 STONEWARE.

		Groups. I.	II.	III.	IV.	V.
A	1	SG, T	SG, T	G–, T–	G–, T, C	G, T, C
	2	SG, T	SG–, T	G–, T	SG, T, C	SG, T, C
	3	SG–, T	SG–, T	SG–, T	Du, C	SG–, T, C
	4	Du	Du	Du	Du, C	Du C
	5	Dr	Dr	Dr	Du, C	Du, C
B.	1	SG, T	SG +, T	SG +, T–	G–, T–, C	G–, T, C
	2	SG, T	SG, T	SG +, T–	SG +, T–, C	G–, T, C
	3	SG–, T	SG–, T	SG, T–	SG–, T–, C	SG +, T, C
	4	Du	SG–, SO–	Du	SG	SG, C
	5	Dr	Dr	Du	SC–	SG, C
C	1	G–, SO–	SG +, SO	G, SO–	G, SO–, C	G–, SO–, C
	2	G–, SO–	SG +, SO	G, SO–	G–, SO–, C	SG +, SO, C
	3	G–, SO–	SG +, O	G, SO	G–, SO, C	SG +, SO, C
	4	G–, O	SG, O	SG, O	SG–, O	SG–, O–, C
	5	G–, O +	SG, O	SG, O	SG, O	SG, O
D	1	SG, O +	SG, O +	G, O	G, O, C	SG +, O +, C
	2	SG, O +	SG, O +	G, O +	G–, O +	SG–, O +, C
	3	SG, O +	SG, O +	G, O +	G–, O +	SG +, O +
	4	SG–, O +	SG, O +	G, O +	SG +, O +	SG, O +
	5	Du, O	Du, O +	G, O +	SG, O +	SG, O +
E.	1	Du	Du	G, O +	SG, O +	Du, O
	2	Du	Du	G, O +	SG, O +	Du, O
	3	Du	Du	G, O +	SG, O +	SG–, O +
	4	Du	Du	G, O +	SG, O +	SG–, O +
	5	Dr	Dr	G, O +	SG, O +	SG, O +

CONE 8 STONEWARE.

		Groups. I.	II.	III.	IV.	V.
A.	1	SG, T	SG +, T	SG +, T	G–, T, C	G–, T, C
	2	SG, T	SG, T	SG +, T	G–, T, C	SG +, T, C
	3	SG, T	SG, T	SG +, T	G–, SO–	SG +, SO–, C
	4	Du	SG–	SG, T	SG, SO–	SG +, SO–, C
	5	Du	Du	Du, SO–	SG–, SO–	G–, SO–
B.	1	SG, T	SG +, T	G–, SO +	SG +, SO–, C	SG +, T, C
	2	SG, T	G–, T	G–, O–	SG +, SO–	SG +, SO–
	3	SG, SO–	G–, SO–	G–, O–	SG +, SO–	SG +, SO–
	4	SG, SO–	SG, SO–	G–, O	SG +, SO	SG +, SO–
	5	SG–, SO–	SG, O	SG, O	SG, SO–	SG, SO–
C.	1	G–, O	G, SO	G, O	G, SO–	G, SO–, C
	2	G–, O	G, O	G, O	G, SO–	G, SO
	3	G–, O	G, O	G, O	G, SO–	G, SO
	4	G–, O	G, O	G, O	G, SO	G, O–
	5	G–, O	G, O	G–, O	G, SO	G, O
D.	1	G–, O	G, O	G, O +	G, O	G–, SO
	2	G–, O	G, O	G, O +	G, O	G–, O–
	3	G–, O	G, O	G, O +	G, O	G–, O
	4	G–, O	G, O	G, O +	G, O +	SG +, O
	5	SG +, O	G, O	G–, O +	G, O +	SG +, G
E.	1	SG +	G–, O +	G–, O +	SG +, O +	SG +, O +
	2	SG	G–, O +	G–, O +	SG +, O +	SG +, O +
	3	Du	G–, O +	G–, O +	SG +, O +	SG +, O +
	4	Dr	SG +, O +	SG, O +	SG +, O +	SG +, O +
	5	Dr	SG, O	SG	SG, O +	SG +, O +

CONE 10 STONEWARE.

		Groups. I.	II.	III.	IV.	V.
A.	1	SG, T	SG, T	SG, T	SG +, T	G–, T
	2	SG, T	SG, T	SG, T	SG +, T–	G–, T
	3	SG, T–	SG, T–	SG, T	SG +, T–	G–, T–
	4	SG–, T–	Du, SO–	SG–, SO–	SG, T–	SG, T–
	5	Du	Dr +	Du	SG–, SO–	SG, SO–
B.	1	SG, T–	SG +, T	—	G–, T	G–, T
	2	SG +, T–	G–, T	—	G–, T	G–, T
	3	SG, T–	G–, T–	SO–	G–, T–	G–, SO
	4	SG, SO–	G–, SO–	G–, SO–	G–, SO–	G–, SO
	5	SG–	SG +, SO	SG, SO–	SG +, SO–	SG, SO
C.	1	G–, SO	G, SO–	G, SO	G, T–	G, T
	2	G–, SO	G, SO–	G, SO	G, T–	G, T–
	3	G–, SO	G, SO	—	G, T–	G, T–
	4	G–, SO	G, SO +	G, SO +	G, SO	G, SO
	5	SG +	G–, O	SG +, SO +	G, O–	G–, SO +
D.	1	G, O	G, SO–	G, O	G, O–	G, SO
	2	G, O +	G, SO	G, O	G, O	G, SO +
	3	G–, O +	G–, O	G, O +	—	G–, SO +
	4	G–, O +	SG +, O	G, O +	G, O +	G–, O
	5	G–, O +	SG +, O	G–, O	G, O +	G–, O
E.	1	SG–, O +	G–, O	G–, O	G–, O	G–, O
	2	SG +, O +	G–, O	G–, O +	—	G +, O +
	3	SG,	G–, O +	G–, O +	—	G, O +
	4	—	SG +, O +	SG +, O	G–, O +	G, O +
	5	Dr	SG +, O +	SG	SG +, O	G, O +

CONE 12 STONEWARE.

		Groups. I.	II.	III.	IV.	V.
A.	1	SG +, T–, C	SG +, T–	SG, T–, C	SG, SO, C	SG +, T, C
	2	SG +, T–, C	SG, T–	SG, T–	SG, SO, C	SG +, T, C
	3	SG, SO, C	SG, T–	SG, T–	SG, SO, C	SG +, T, C
	4	SG, SO, C	SG, SO–	SG, SO–	SG, SO	SG, T, C
	5	SG–, SO, C	SG, SO–	SG, SO	SG, SO, C	SG, SO–, C
B.	1	SG +, SO–, C	SG +, T–	SG +, SO–	SG +, SO, C	SG +, T, C
	2	SG +, SO–, C	SG +, T–	SG +, SO–	SG +, SO, C	SG +, T, C
	3	SG +, SO–	SG +, SO–	SG +, SO	SG +, SO, C	SG +, T, C
	4	SG +, SO	SG +, SO–	SG +, SO	SG +, SO +, C	SG +, T–, C
	5	SG, SO–	SG +, SO	SG +, SO +	SG +, SO +	SG +, SO–, C
C.	1	G, SO	G, SO	G, SO +	G–, SO–	SG–, T–, C
	2	G, SO	G, SO	G, SO +	G–, SO–	G–, SO–, C
	3	G, SO	G, SO	G, SO +	G–, SO–	G–, SO–, C
	4	G, SO	G, SO	G, SO +	G–, SO	G–, SO, C
	5	G–, SO	G–, SO	SG, SO +	SG +, SO	G–, SO +, C
D.	1	B, SO	G, O	G, SO	G, O	G–, C
	2	G, O	G, O	G, SO	G, O	G–, C
	3	G–, O	G, O	G, O	G, O	SG +, C
	4	G–, O	G, O	G, O	G, O	SG, C
	5	SG, O	SG, O	SG, O	G–, O	SG, C
E.	1	SG	SG	Du	G–	G, C
	2	Du	Du	Du	G–	G, C
	3	Du	Du	Du	G–	G–, C
	4	Dr	Du	Du	SG +	SG +, C
	5	Dr	Dr	Dr	SG	SG +, C

The percentage composition of the extreme glaze of each series included within the largest of these rectangles are here given :—

Glaze.	C_1			C_5		
Groups.	II.	III.	IV.	II.	III.	IV.
Whiting	11·4	10·1	9·2	7·8	6·9	6·3
Feldspar	41·9	56·3	68·2	28·9	53·7	46·7
Clay	19·4	13·1	7·9	29·5	25·2	21·7
Flint	18·1	12·2	7·4	27·4	23·5	20·2
Zinc oxide	9·2	8·2	7·5	6·3	5·6	5·1
Total	100·0	99·9	100·2	99·9	99·9	100·0
Glaze.	D_1			D_5		
Groups.	II.	III.	IV.	II.	III.	IV.
Whiting	5·6	5·1	4·6	3·9	3·5	3·2
Fieldspar	42·8	57·0	69·0	29·1	39·0	47·1
Clay	19·7	13·2	8·0	29·8	25·4	21·8
Flint	18·3	12·3	7·4	27·6	23·6	20·2
Zinc oxide	13·8	12·5	11·2	9·6	8·5	7·7
Total	99·9	100·1	100·2	100·0	100·0	100·0

[1] By Ross C. Purdy, Columbus O. The study here reported was made with the senior class at the Ohio State University. The study was made first by the class of 1910 and repeated with new mixes by the class of 1911. All weighings, &c., were made by two members of the class employed for that purpose. The report as here presented is a copy of the class report reprinted from Vol. XIII. of the Transactions of the American Ceramic Society.

The composition of the intermediate glazes could be obtained by interpolation from those given above.

Of these glazes, those of Group III. and Group IV. are in all respects the best. Group IV., D2 is practically the same glaze as glaze VI., D recommended by Purdy in Vol. V., "Transactions A.C.S.," p. 165, as being a good opaque glaze maturing well at cone 6. In this experiment it has excellent heat range (7-12) and has very fair opacity. Molecular formula for IV., D2 is :—

$$\left.\begin{matrix}0{\cdot}40\ K_2O\\0{\cdot}15\ CaO\\0{\cdot}45\ ZnO\end{matrix}\right\}\ 0{\cdot}55\ Al_2O_3\ 3{\cdot}3\ SiO_2$$

Glaze V., D2 is quite similar to Parmelee's H-30 (p. 595, Vol. IX., "Trans. A.C.S.") and to the one recommended by Purdy in his first paper (p. 76, Vol. IV., "Trans. A.C.S."). While this glaze has excellent heat range, opacity, &c., on flat tile, our general experience with the glazes in Group V., which contains 0·5 equivalent feldspar, gives emphasis to the warning given by Purdy that on wares burned under commercial conditions, this glaze would not be as free from physical defects as would those containing less feldspar. Factory experience by former students of the Ohio State University, Ceramic Department, in every instance checks Purdy's findings in this respect.

Opacity.

Our summary on opacity will be made in the following order :—

A. Influence of ZnO
B. Influence of CaO
C. Influence of Zno vs. CaO
D. Influence of Al_2O_3
E. Influence of Clay
F. Influence of Feldspar
G. Influence of Heat treatment

A. Influence of ZnO.—1. Since, on comparing corresponding members of the series in any group, we find that the opaqueness of the glaze increases rapidly with each increment of ZnO, it follows that ZnO operates decidedly in producing opacity.

2. As low as 0·375 ZnO with 0·5 Al_2O_3 (V., D1) and 0·15 ZnO with 0·8 Al_2O_3 (IV., B5) produces opacity equal to the best used on stoneware. This is in accordance with Purdy ("Bristol Glazes," Vol. IV., "Trans. A.C.S.") who gives as his lower limit of ZnO content with 0·5 Al_2O_3 as 0·35 equivalent. None of his glazes, however, contained more than 0·5 Al_2O_3, which accounts for the fact that his lower limit of ZnO content is higher than that found in this investigation.

B. Influence of CaO.—1. In passing from group to group, the opacity of corresponding members and series remains practically the same, in spite of the fact that ZnO and CaO are decreasing simultaneously. This may result from the decreased CaO, causing either a decrease in the amount of molten solvent, leaving more of the glaze ingredients as undissolved or suspended matter, or in a decrease in the solvent action of the molten flux. Then, again, since we know that in mixtures of calcium oxide and clay we have decided chemical reactions resulting in a complete recast of the constitution of the mixture, the composition of the new compounds thus formed being of at least three sorts,[1] we might argue that this constancy in opacity in the corresponding members from group to group may be due in part to the formation of certain $CaO—Al_2O_3—SiO_2$ compounds as suggested by Parmelee.[2] We believe, however, that aside from the change in the amount or in the solvent action of the molten flux, or in the possibility of the separating out of new $CaO—Al_2O_3—SiO_2$ compounds, this constancy in opacity in the corresponding members from group to group may be due (at least in part) to the mere increase of feldspar.

In the following table is given the percentage composition of the extremes of Series C in each of the five groups. The opacity of each of these extremes, as well as that of the intermediates of this series, did not differ from group to group. This same constancy in opacity of the corresponding series and members from group to group was exhibited in all the series.

Material.	Member 1, Series C. Groups. I	II	III	IV	V
Whiting	12·0	11·4	10·1	9·2	7·7
Feldspar	33·4	41·0	56·3	68·2	86·1
Clay	23·2	19·4	13·1	7·9	—
Flint	21·6	18·1	12·2	7·4	—
Zinc oxide	9·7	9·2	8·2	7·5	6·3
Total	99·9	100·0	99·9	100·2	100·1

Material.	Member 5, Series C. Groups. I	II	III	IV	V
Whiting	8·3	7·8	7·0	6·3	5·3
Feldspar	23·0	28·9	38·7	46·7	58·7
Clay	32·1	29·5	25·2	21·7	16·4
Flint	30·0	27·4	23·4	20·2	15·2
Zinc oxide	6·7	6·3	5·6	5·1	4·3
Total	100·1	99·9	99·9	100·0	99·9

C. Influence of ZnO vs. CaO.—From Series C, where the ratio of CaO : ZnO is as 1 : 1, to Series E containing no CaO the opacity is decidedly increased, and from Series C to Series A (containing no ZnO) the opacity is decidedly decreased. This shows that ZnO is positively an opacifier while CaO certainly adds nothing to the opaqueness of the glazes even when present in amount as high as 0·8 equivalent (Gr. 1, Series A). This is contradictory to the impression received from a statement by Parmelee, p. 597, Vol. IX., "Trans. A.C.S."

D. Influence of Al_2O_3.—1. By comparing Members 1 to 5 in Series A (which contains no ZnO) we find that the degree of opaqueness is the same for corresponding members in each of the groups, notwithstanding the fact that as we pass from Group I. to V., the equivalent of K_2O is increasing at the expense of CaO and the Al_2O_3 is being derived more and more from feldspar, and the content of free flint is progressively decreasing.

2. As pointed out under the heading "Influence of ZnO," 0·15 equivalent of ZnO requires 0·8 equivalent Al_2O_3 to produce opacity equal to that produced with 0·375 equivalent ZnO and 0·5 equivalent Al_2O_3. Since these glazes are highly viscous, and as glasses are far from perfect solutions, and since increased opaqueness in these glazes is nearly always due to material in suspension which has either never been in solution or has crystallised out from solution, and, again, since CaO has been found empirically to react more readily and in larger proportions with clay than does ZnO, it is not difficult to figure that with high CaO we must have more clay to obtain equi-opacity.

(To be continued.)

[1] Rieke, "Sprechsaal," No. 45, 1907. [2] Trans. A.C.S., Vol. IX.

Fragments.

¶ A 30 years' subscriber writes from Devonshire: "I always look forward to your issue and the improvements you have made in your Journal."

* * *

¶ Overheard in the Stoke-on-Trent Reference Library. Young designer, on entering, to another apparently sketching from an art journal: "Hello. What are you cribbing now?" Reply: (with righteous (?) indignation) "Sir, we do not crib; we adapt." The foregoing conversation has an interesting bearing on our Editorial Note on Reproductions (p. 889.)

* * *

¶ A Kentish retailer in renewing his subscription to THE POTTERY GAZETTE remarks: "I think it is a first-class Trade Journal, and our trade interests are well studied by the proprietors."

* * *

¶ The Lady Inspectors' lengthy section of the Factory Acts' report, referred to on p. 927, if reprinted in full, would be found fully to maintain the reputation of the sex for volubility.

* * *

¶ One of our representatives, after visiting a certain pottery, reported that a member of the firm admitted that they knew very little about their trade, and said that they "put the clay in the kiln and wait and see what happens." We fear that there are a good many potters who do the same, although they do not confess it so candidly.

* * *

¶ Business is reported dull in the Potteries just now (p. 944). Let us hope that while the potters are a-Wakin' trade will awaken too.

* * *

¶ "London Opinion" recently asked why the merchant who didn't advertise was like a man rowing a boat. "Because he goes backwards?" someone suggested. "No," said the propounder of the riddle, "because he has to get along without sales."

* * *

¶ The new White Star liner the "Ceramic," started on her maiden voyage during July. If the English Ceramic Society ever takes a trip across the Atlantic this, of course, would be the vessel they would patronise.

* * *

¶ "It is announced that by order of the Minister of the Court of the Tsar M. Scraphin Sourbinine, the Russian sculptor, has come to London in order to make various models of Mme. Pavlova, which are to be reproduced in porcelain in the Tsar's own private porcelain manufactory." Will this inspire some enterprising English potter to reproduce the charms of some graceful danseuse?

* * * *

¶ Nottingham lace designers are forming an Association to assist in the preventing of piracy of lace designs or draughts by giving guarantees that:—(1) No design or draught shall be duplicated or copied, except with the written authority of the original maker or the owner of the same. (2) No lace shall be copied without signed authority from the lace manufacturer, lace finisher, or lace agent supplying it, such forms to be provided by the association. (3) No copy whatever shall be done for any person, firm, or company outside the United Kingdom. Similar action on the part of pottery and glass designers might have a useful effect.

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

THE annual exodus from the Potteries has commenced, and manufacturers and operatives alike are making their way to their chosen holiday resorts for their Stoke Wakes relaxation. For a week or more the population of this centre of industry will be transferred in a considerable proportion to Blackpool, the Isle of Man, North Wales, and, in lesser numbers, to the more distant and less frequented haunts, where change of surroundings and refreshment of mind and body may be secured. Everyone will wish them a really good time, and only regret that they are not leaving the district under happier auspices; for at the present time trade conditions are distinctly depressing. For several months I have commented on the lack of buoyancy and the tendency to depression in the home trade, and last month I pointed out that things were far from well in the export markets, despite the apparently satisfactory state of affairs indicated by the Board of Trade returns. Hitherto, however, there have been some redeeming features; now there are none, except, of course, that everyone has hopes for the future. The past month has, indeed, seen a distinct development for the worse.

For some months the lesser factories, and particularly those whose range of productions is limited in variety and market, have been feeling the flatness of trade. Now, however, small and large firms alike are feeling it, and there is a general shortage of orders. The home demand is worse, and the export business is now sharing in the depression. A large manufacturer, who caters for all markets and produces a great variety of goods, remarked to me quite recently, "I certainly fear that a slump in business has set in. How far it will go, I cannot say. We hope for an improvement, of course, but the prospect is far from good." A month ago the average round of operations for factories was four and a half to five days per week; during July not a few have been limited to four days per week, and some even less. There are instances of works having been practically closed down for two and three weeks prior to the holidays, though, happily, these cases are the exception. In a normally busy period the manufactories run steadily up to Stoke Wakes, and then suspend business for a week, but this year a different state of affairs prevails. Some of the big works, where a busy time has been experienced until the last month, will close for at least ten days, but the average will be longer. Not a few factories will be idle for three weeks. This is certainly indicative of a very unsatisfactory state of affairs.

As has been the case for a considerable period, the chief complaint in all cases is in regard to the home market, but now those who have found occupation in supplying goods for shipment are necessarily joining in the general lament. The United States demand is distinctly flat, and is likely to remain so for a considerable time, at any rate. Many had hoped that the Tariff Bill would have been through the Senate and become operative by now, but it is still wending its weary way through the mazes of discussion. The law's delay, proverbial

though it is, is no more exasperating than the delay of the makers of the law. For two months the tariff measure has been in the hands of the Senate Finance Committee and the caucus, and on July 11 it was reported by the Senate. Now a further debate is in progress. It is generally believed that the reductions on pottery goods will become operative in the form already announced, but the view held by those best informed is that the date of operation will not be earlier than Oct. 1. Meanwhile the business of the country is being stagnated in consequence, and not merely the United States, but the countries supplying its markets are suffering accordingly. This general interference with commercial transactions, owing to changes of import duties, is one of the inevitable accompaniments of a Protective system, and Free Traders are pointing to it as a serious argument against a system of tariffs. It is certainly unfortunate that the change cannot be caried out with something like expedition. Of course, many people have been looking forward to a bumping supply of orders from the United States immediately the import rates are lowered, but manufacturers are now becoming extremely fearful that the general condition of business may be such that expectations will not be at all realised. One manufacturer, who deals extensively with the American market, informs me that he does not now anticipate a marked revival of business—and it will certainly have to be a very great improvement if it is to compensate for the prolonged period of bad trade.

Even the Canadian demand, which has for so long proved a valuable stand-by, is endangered. True, it is still fairly good, but the commercial and financial conditions of the Dominion make the future outlook rather gloomy. There are rumours of a financial crisis in Canada, with a consequent slump in trade, and with such a possibility in prospect the pottery trades, as everyone knows, would be the first to suffer. The speculations in land have, of course, been tremendous; people have been overbuying themselves, and with banks calling in loans and forced sales resulting, a threatening situation exists. It is certainly to be hoped that a market, which has developed so enormously to the benefit of the English potter, will not suffer any permanent retardation. Then there is the case of the South American market, which has also proved an excellent one for our manufacturers for a considerable time. That trade is now bad beyond qualification. The depreciation in Argentine securities, particularly railways, and the depressed financial conditions, demonstrate the unsatisfactory commercial conditions obtaining, and the potter is very much affected by that influence. The prolonged international unrest caused by the disturbed condition of the Balkans is having its effect, and, on the top of this, it must be remembered that the world has enjoyed a long cycle of good trade, and that reaction must inevitably come sooner or later.

Any depression in business would not be so severely felt in the Potteries if the burdens of manufacturers were lighter, but materials and everything which goes to the manufacture of goods are still up in price. Coal, to quote a manufacturer's remark, is at an unheard-of figure. The increase of miners' wages in April, to the maximum of 65 per cent. over the basis, has meant to those making new fuel contracts a further advance in price, and on the top of that the difficulty of obtaining slack, and the necessity of using coal instead, have added enormously to fuel bills. Pottery manufacturers estimate that, taking all circumstances into account, their coal is costing them 50 per cent. more than it did prior to the coal strike. This, of course, is a very serious item indeed, when the enormous consumption of fuel in the pottery industry—quite disproportionate to the consumption in other industries—is considered.

Without any desire to take an alarmist view, attention should be called to the possibility of another coal strike in North Staffordshire—this time on the non-unionist question. It is much to be hoped that no stoppage will occur, but at the time of writing it is certainly within the bounds of possibility, and manufacturers will be well advised to look to their coal stocks, so far as the limited accommodation of the average "pot-bank" permits. The position of affairs is that the delegate meeting of the North Staffordshire Miners' Federation decided to take a ballot of all adult members on the following questions:—"Shall notice be tendered to terminate contracts for the purpose of bringing all men and boys employed in and about the coal and ironstone pits of North Staffordshire into the Federation? Unless this can be accomplished without tendering 14 days' notice, are you willing that such notices shall be given?" This ballot was taken during the week ending July 19, and though at the moment no official information is forthcoming as to the result of the poll, it is understood that it favours by a considerable majority the tendering of notices unless the end in view can be obtained by other means. The result of the ballot is to be submitted to a private delegate meeting of the Federation. According to the last return I have at hand, there are approximately 30,000 persons employed in or about the North Staffordshire mines, and according to a manifesto issued by the Federation on July 9, the membership approximated 24,000, leaving about 6,000 non-union men and boys. Since then the non-unionists have been coming into the ranks of the Federation in considerable numbers, but the determination of the officials and delegates of the union is to bring in every single person, as has been done in other areas. There really does appear no reason for a strike taking place on this question, but the facts have to be faced that in South Wales and elsewhere stoppages have occurred and continued until all the remaining non-unionists have been "rounded-up." North Staffordshire labourists have the reputation for reasonable and pacific attitude, and they will doubtless be true to their reputation. Should a stoppage occur, it would doubtless be of short duration; but this district has such terrible memories of the last strike, that even a brief stoppage cannot be anticipated other than with alarm. In the Cheadle part of the North Staffordshire coalfield the question was settled a few months ago, but not before notices had been tendered. Any cessation of work was, however, avoided, and it is to be fervently hoped that such will be the case in this instance.

In view of the efforts which are being made to improve the health of the operatives by means of the new Pottery Regulations, the recently published reports of the Inspectors of Factories for 1912 are of special interest. On the subject of lead poisoning, Dr. T. M. Legge, the medical inspector, gives figures, quoted elsewhere in this issue, which show a marked improvement compared with a few years ago. The improvement is even greater than appears from the figures, for since the Workmen's Compensation Act was made applicable to lead poisoning, there has been greater inclination to notify all cases. Regarding the general health of pottery operatives, valuable statistics are included in the annual report of the North Staffordshire Provident Association, a friendly society, having a membership in the district of 4,553. The sickness incidence is divided into groups according to occupation, and the report observes:—"The potter

group of members (males) still retain their comparatively favourable position, the respective average experience amongst the occupation groups being: The potter group (males), 2 weeks 6 days 15 hours; the miner group, 4 weeks 5 days; the plumbers and painters' group, 2 weeks 5 days 4 hours; the railway workers' group, 4 weeks 3 days 11 hours; the male other occupation group, 2 weeks 6 days 16 hours. The average experience of the male potter group was, therefore, less than that of the miner group by 1 week 5 days 9 hours; less than that of the railway workers' group by 1 week 3 days 20 hours; and less than that of the other occupation, or non-hazardous, group by 1 hour. The experience of the female pottery workers has been abnormal during the year, the average showing an advance on that of the previous year of no less than 5 weeks 1 day 2 hours.'' At the annual meeting Mr. F. H. Wedgwood commented with gratification on the favourable position of the male pottery operatives. The miners and railway workers, he said, showed a much heavier percentage of sickness, and a remarkable thing was that the two trades in which men worked among lead—potters and painters and plumbers—came off fairly lightly. It was not so among the female pottery workers, however, in connection with whom matters were so serious, as revealed by their returns, that the directors were proceeding to appoint lady inspectors to visit the female members who fell sick.

For a considerable time the Stoke-on-Trent Education Committee have had under consideration the question of making the art instruction given in the several towns more closely allied to the potting industry. Despite the success achieved and the excellent work done in the local art schools, it has long been felt that it was not directly meeting the requirements of the trade. The curriculum of the schools may have been largely to blame, and also the system laid down by the Board of Education, but there is no denying the fact that the art schools have not received the encouragement of manufacturers. The latter have regarded the art instruction of the schools as alien to the art work of the factories, and probably with some cause too. Now, however, there is the opportunity of making the schools of art really helpful to the industry. The Education Committee have appointed a Joint Advisory Sub-Committee on Art, whose members include art directors of potteries and others possessing special knowledge of the artistic requirements of the trade. This sub-committee have considered the matter very fully, inspected the buildings and equipment of the several schools of art, obtained information as to attendance, staffs, accounts, scholarships, &c., and considered the question of reorganising and correlating the whole art instruction of the county borough.

At the commencement of the last session the Education Committee put into operation a new curriculum, designed with the object of educating students in the particular artistic work they are concerned with. The whole syllabus was arranged in courses, and each set of courses was mapped out to suit a particular branch of work; for instance, there was a series of courses for the pottery designer, another for the tile designer and draughtsman, another for the pottery modeller, and so on. Too short a period has elapsed to say that the new curriculum has fulfilled its purpose, but it was a step in the right direction. Now, however, the Joint Advisory Sub-Committee on Art have decided that much more must be done, and their recommendations were confirmed at the last meeting of the Education Committee. Mr. Stanley Thorogood, A.R.C.A., the accomplished headmaster of the Burslem School of Art, has been appointed Superintendent of Art Instruction, and he is to control the whole of the art work in the county borough. Moreover, the other four art masters of the district are to become specialists, and to teach and supervise the teaching of special subjects of importance to the potting industry. The details of the scheme have yet to be worked out, but it has been regarded as essential that, first of all, the whole scheme of art education should be under the control of one directing head. For this position Mr. Thorogood is eminently fitted. After a brilliant career at the Royal College of Art, he came to Burslem some fifteen years ago. He has largely specialised in the artistic side of the potting industry, and has an intimate acquaintance with its requirements. Excellent work in the matter of designing and executing pottery has been done, in particular, at his school. Last year Mr. Thorogood made an extended tour of the Continental trade schools, and it was chiefly on his report that the new curriculum of the local schools was framed.

The scheme, as Mr. F. H. Wedgwood pointed out at the meeting of the Education Committee, does not promise any economy, but if the desired results are achieved, the expenditure will be more than returned in the advantage gained by the staple industry. Last year the five art schools of Stoke-on-Trent cost £3,497, of which £1,514 was borne by the rates, the balance being provided by grants. In the present year the income from the latter source is likely to be less, so that, apart from new expenditure, the charge on the local rates will be increased somewhat. The number of pupils on the books, which, of course, is more than those in regular attendance, is 407, excluding elementary school teachers taking an art course, so that the expenditure per head is £8 11s., of which £3 14s. 5d. has to be provided by the local authority. Under the new scheme, however, the number of pupils should be considerably increased, and the per capita charge proportionately reduced. The new Central School of Science and Technology should do much for the technical side of the industry, and these proposals should materially assist the artistic, so that in the not distant future the rising generation of potters and pottery craftsmen should be adequately equipped.

The Governors of the new Central School of Science and Technology, at a recent meeting, considered the questions of the stipends of the Principals of the Pottery and Mining Departments of the School, and decided to fix the salary of Dr. J. W. Mellor, the Principal of the Pottery Department, at £600 per annum, rising by increments of £100 to £1,000. Regarding the remuneration of Mr. J. T. Stobbs, the Principal of the Mining Department, the consideration of the matter was adjourned to the next meeting. It was reported that the erection of the buildings was progressing as fast as possible, and it was hoped that the pottery laboratory and lecture room would be ready by the middle of September. As the result of representations made by a deputation to the general manager of the North Staffordshire Railway Co., the directors of the company, it was reported, had agreed to grant concessions to bona-fide students travelling to and from the schools—namely, single fare for the double journey. This was considered highly satisfactory.

Mr. A. J. Caddie, the Chief Curator of the Stoke-on-Trent Museums, was elected a Vice-President of the Museums' Association at the recent annual conference. Mr. Caddie has been a member of the Council of the Association for the past three years. A former student of the Burslem School of Art, and for a number of years a ceramic artist at Doulton & Co.'s works at Burslem

—Mr. Arthur Scott—has been awarded the full diploma of the Royal College of Art, London, entitling him to the degree of A.R.C.A. Mr. Scott had a very successful career at the Burslem School of Art, and went to the Royal College to continue his studies after gaining a National Scholarship in Painting. Three former students of the Hanley School of Art, Messrs. John Adams, R. R. Tomlinson, and George Ryder have also gained the Associateship of the Royal College of Art. Messrs. Adams and Tomlinson went to the Royal College from Hanley on gaining Royal Exhibitions, and Mr. Ryder on obtaining a National Scholarship. All three of the students were very successful in the National Competition and Government examinations when pursuing their studies at the Hanley School.

The first prosecution under the new Regulations for the manufacture and decoration of pottery took place at Burslem on July 1, though the point involved was not a new one, and was, in fact, provided for under the now superseded Special Rules. The case was, however, of special interest, inasmuch as it emphasises the fact that employees as well as employers have their responsibilities, a matter that is too often overlooked. The Factory Inspector, Mr. C. R. Pendock, had taken out a summons against John Maddock & Sons, earthenware manufacturers, of Burslem, the alleged offence being that they employed as a glost placer a man named Joseph Lowndes, who had not been examined by the certifying surgeon during a period of one calendar month previously. Mr. Pendock explained that in May the man Lowdnes died from lead poisoning, and at the inquest it was stated that he had not been examined for a considerable time by the factory certifying surgeon. He was a casual worker. The defence was that Lowndes worked for a contractor named Cartlidge, whose duty it was to see that the casuals employed by him had been examined. Cartlidge gave evidence, and admitted that the defendants had no knowledge that he employed Lowndes. He agreed that it was his duty to inspect the cards of casuals he engaged, but in this case he did not do so, taking Lowndes' word that he had had his card signed. The defendants accordingly contended that they were in no way responsible. Under the Factory Act, if the occupier is unaware of an offence having been committed, and has not connived in the offence, he may take proceedings against the offending person. In this case the defendants had taken proceedings against Cartlidge, and the Stipendiary Magistrate fined Cartlidge 20s. and costs, and exonerated Messrs. Maddock by not recording a conviction against them.

Two pottery fires have occurred during the month, one of them of a disastrous character. This occurred on July 19 at Mr. James Kent's Old Foley Pottery, King-street, Fenton, and damage to buildings and machinery was done to the estimated amount of £10,000. The outbreak, the origin of which is unknown, was discovered at half-past one in the morning, and when the Longton District Fire Brigade reached the scene shortly afterwards, the central portion of the works was a mass of flames. The brigade did efficient work in saving the other parts of the works, and in preventing the flames spreading to the adjoining pottery of E. Brain & Co., but the buildings which they found on fire were gutted. The blocks destroyed comprised a four-story building 50ft. by 40ft., and a three-story building 90 ft. by 35 ft., and of these only a few tottering walls remained. They comprised slip-house, engine-house, electric power-house, clay stores, potters', printers', and mouldmakers' shops. A large quantity of potters' machinery, as well as electrical generators, printing presses, copper plates, and moulds were destroyed. At one time there was a danger of the boiler, placed under one end of the burning buildings, bursting, but the brigade successfully dealt with this contingency. The second fire occurred at the Garfield Pottery, High-street, Longton, occupied by Roper & Meredith, on the evening of July 20. It appears to have been caused by the heat from an oven igniting the surrounding woodwork, and a considerable portion of the potters' shop and a drying stove were destroyed and moulds and "green" ware were damaged. In both cases the damage is covered by insurance.

Matters of importance to the trade of the district were discussed at the meeting of the Stoke-on-Trent County Borough Council on July 24. A proposal was made by the General Purposes Committee to refer to the Chamber of Commerce a communication from the Canals and Waterways Association, suggesting a contribution towards the cost of their proposed propaganda in favour of legislation giving effect to the recommendations of the Royal Commission on Canals and Waterways. The proposal was referred back to the Committee, and in the course of the discussion Mr. L. L. Grimwade said, if the district were to be delivered from its present position of isolation and heavy traffic rates, something would have to be done, but the difficulty was to know what was the right thing. The Royal Commission made certain recommendations which did not meet with the favour of experts, or so-called experts, in that locality. Personally, he approved of the findings of the Royal Commission. The Town Clerk said the General Purposes Committee had felt that the borough had little interest in the Commission's report. They already had a scheme of their own, and thought it better to give their attention to that rather than to the broader question. The Council also considered the question of the assessments. Recently the two Unions, in which the Potteries towns are included, have been re-valued, and many of the assessments considerably increased, but it is contended that the basis of valuation in the two Unions is different. The Council decided to invite the two Unions to send representatives to a conference with representatives of the Council, in order to discuss the practicability of an amalgamation or unification of the two Unions. Reports were presented, showing that the finances of the gas and electricity concerns, as the result of the year's working, are in a satisfactory state. The hope was expressed that when the new system of central electricity supply was in full operation, the electricity works would be able to make a substantial profit.

There was widespread regret in the Potteries at the announcement of the death of Herr Fritz Zietsch, which took place at Charlottenburg, Germany, on July 6. Herr Zietsch was the secretary of the International Congress of Pottery Workers, and when the Congress met in Hanley in August last he presided over those interesting gatherings. He made many friends, and impressed everyone who met him with his intelligence, business capacity, alertness, and eloquence. Though still a young man, he was a member of the Reichstag, and gave promise of a very successful career, which, unhappily, has been cut short. On behalf of the Potters' Union, Mr. J. Lovatt telegraphed to Herr Georg Wolhman, another member of the Congress, an expression of the sorrow of his "English comrades."



THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

THERE has been a very great improvement in the weather conditions throughout Scotland during the month of July, and that, so far, has affected our trades favourably. This has been felt more particularly in the high-class retail houses of the cities and large towns, and the turnover in these has been about the best for the month of July during some years past. Money seems to have been more plentiful, at least for the purchasing of the more costly wares of our industries, and this is a feature which has made itself felt, in spite of the fact that the very fine weather prevailing during the past three or four weeks has taken away many of the families to the summer resorts. The same good report cannot unfortunately be made with reference to the more utilitarian retail businesses in the cities and towns, for these have been feeling the ill effects of the great outbreak of strikes prevalent in Scotland during the past two or three months, of which disturbances a good many are still running their course. As noted in foregoing reports in this column, the strikes have not been of any very great moment when taken individually, for not more than one or two of them have been of any bulk so far as the number of workmen and the number of families are concerned. Still, there has been such a plethora of these petty strikes, and they have been so spread over the entire country, that the damage to the rank and file of our very sensitive trades has been very marked.

During July the coast and country summer resort trade in china, earthenware, and glass has commenced in earnest; later than usual by about five or six weeks of time, owing to the persistent backwardness of the season up to the closing days of June. Now that a start has been made, the retailers at the watering places, &c., are able to report good progress, and there have already been some fresh orders for the wholesale houses. The weather, at the time of writing, promises well as regards steadiness, and granting that this promise is even only moderately fulfilled, the summer resort season, for our industries, should come out not so badly after all, even although so tardy in commencing.

Operations during July, on the part of the wholesale houses of Glasgow and other centres, have been much interfered with because of holiday observances. There has been the great stoppage due to the recurrence of the annual "Fair" holidays in Glasgow, when potteries and all other productive factories are closed for a period of one week at the shortest, and lasting up to quite three weeks in certain individual cases. At the date of the present writing this Glasgow stoppage is nearing its close, and travellers are taking the road after orders again. A fair measure of success in the booking of these is expected, but there are drawbacks which will act against anything like a very free booking. One of these is the epidemic of small strikes already alluded to; and another, which will affect the northern regions of the country, and especially the fishing centres, is the comparative failure of the herring fishing, most marked in Orkney and Shetland and in the northern mainland. Catches have been little more than one-fourth of those of 1912. The deficit is not quite so big on the southward coast, such as Peterhead, Fraserburgh, and Aberdeen, but even there the falling off has been quite notable. Still further south the takes are found to improve, and at Berwick-on-Tweed the number of crans landed during the present season actually exceeds the total for 1912 up to the end of July.

THE CORNISH CHINA CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

QUITE a new situation has arisen in connection with the demand for an increase of wages by the Cornish china clay workers since our last issue, when a number of the employees of the Carne Stents China Clay Co. (the proprietors of an old clay works which has been lately resuscitated) declined to resume work in consequence of the non-compliance to their demands. The men, it appears, had sent in their notices through their union, which the company refuse to accept. Speaking on the subject at an open-air meeting the organiser (Mr. C. R. Vincent) said the men sent in their petition eight months ago, and no notice had been taken of it. The company had cancelled their decision to pay the men fortnightly, and refused to come to any arrangement regarding the wages question. Captain Payne informed a press representative that the men had been paid 3s. 6d. per day of 8 hours, and were offered 3s. 9d. for a day of 8½ hours, which included an hour for meals. This the men decided not to accept. He stated that when he got to the works on the morning of July 21 he saw Mr. Vincent at the office, surrounded by about 30 men. He told Mr. Vincent that he could not recognise his authority to give notice for the men, and informed the men that if they left they must take the consequences, in accordance with the agreement, which was to give or take a week's notice. Afterwards Captain Payne saw the men and Mr. Vincent again at the top of the clay-pit. Mr. Vincent was trying to persuade the men to leave the pit, and asking if they were going to act as blacklegs. Captain Payne then ordered the agitator off the works. Subsequently a message was brought to him that the pitmen had been driven from the works through the strikers stoning them. The pit men were persuaded to return, and Captain Payne informed the strikers that if they resumed their interference he would telephone to the police. After some persuasion the strikers left the works, many of them saying that they would rather be working, but they were afraid of being injured by the others. The non-unionists are not only in the majority, but they comprise the best and most responsible workers.

Up to the time of going to press there has been no further disturbances at the Carne Stents China Clay Works, and several constables have been stationed there to prevent a recurrence of the stone-throwing episode. The men on strike have been peacefully picketing, and have been informed to call for their pay. It is stated that about 150 men are now affected from the Carne Stents, Biscovillack, and J. Lovering & Co.'s works at Penhale. At the Gunheath Clay Works the men intended to strike, but afterwards decided to give the company another week. In connection with the men who have struck at the Carrancarrow China Clay Works, they are demanding the increase given recently to various other works under the West of England and Great Beam China Clay Co. The works, although affected, are not inactive as the result of the unrest, whilst the large clay works in the St. Stephens, St. Dennis, Bugle, St. Breward, and Nanpean districts are not as yet even slightly affected, nor is the situation considered to be serious or a general strike anticipated. The labour question has also been prominent among some of the clay workers in the Ball Clay Works in Devonshire, where a number are out. The men's leaders are there denouncing the non-unionists as thieves of the worst type, and are urging the strikers to regard those who are working as though they were suffering from cholera.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, May 29.

ONE of the most prosperous and progressive suburbs of Melbourne to-day is Brunswick, the centre of the Pottery industry. The growth of Brunswick as a trading centre has sprung mainly from its manufacturers. No other suburb can boast such a volume and variety of local industry. It began with the brick works. The whole suburb rests on one of the finest clay beds in the world, and the Melbourne of twenty-five years ago was built largely of Brunswick bricks. Brickmaking machinery supplanted the old fashion of making bricks by hand early in our history, and it was then found that the machine-made article could best be made of the solid hard clay at Brunswick.

In fact, it was at the kilns in Brunswick that some of the earliest attempts were made at producing bricks with shale and clay mixed. The experiment was entirely successful, and resulted in the production of a standard brick, which for strength, alignment, and colour has few rivals in any part of the world.

While the brick industry was at its height in Brunswick, came the demand for vitrified earthenware pipes for the sewering of the metropolis. Again the Brunswick clay met all requirements, and the sewer pipes and lavatory fittings throughout Melbourne originated largely in the Brunswick potteries. In addition to the pipes, the manufacturers proceeded to try the market with earthenware crockery of Brunswick clay, and gradually established a regular market for their wares.

The brick and pottery industry soon settled a large artisan population, and, in the natural channel of trade this opened up, capital flowed and sought employment in other industries. The latest list of manufactures in the district includes bricks, tiles, pottery, earthenware, sewer pipes, and the higher branches of the potter's art in gradually increasing volume. The suburb is only 4½ miles from Melbourne, and is on a twopenny tram route. A very considerable proportion of the locally made goods finds a steady market in the great neighbouring shopping thoroughfares. The trade done is largely on a cash basis, and, as a result, the business men are rapidly entrenching themselves behind a solid wall of reserve capital. They are not content. however, to leave their surpluses unemployed, but have seized every safe opportunity to transfer them into extensive shops and show rooms on their own freeholds. The natural result is that our pottery suburb is well in the front rank of progress. The manufacturers are substantial men of standing in the community, and it is evident that the future of Brunswick—bound up with its rapidly-growing pottery industries—must expand prodigiously and become ultimately the centre of these industries so far as Australia is concerned.

A statement just issued by the Federal Treasury shows the state of the consolidated revenue fund for the expired three-quarters of the current financial year as compared with the figures for the corresponding period of last year. The customs revenue for duties on imported goods show increases, that on earthenware, china, &c., for the nine months of the current year having been £378,620 15s. 9d., as against £285,000 14s. 2d. for the corresponding nine months of 1912, an increase of £93,620 1s. 7d.

The French Glass Industry.—A British Consular Report from Lyons states that business in the glass-making industry was less satisfactory last year. Labour is scarce in this trade, and most works are actively engaged in transforming their plant, with a view to mechanical production, to neutralise the falling-off in hands.

The Gazette.

Dissolution of Partnership.

NOTE.—*When two dates are given in the following announcements the first is the date of the dissolution. The date in parentheses is that of the official advertisement.*

BULL & Co., 72, Henrietta-st., Glasgow, glass bevellers, &c. June 30, by retiral of Ernest Jno. Bull. Rudolph Fletscher will continue the business in his own name, and has acquired right to all the assets of the firm, and will discharge all its liabilities. (July 4.)

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

ARVON BRICK AND TILE CO., LTD., Carnarvon.—T. Jones, Brynafon, Carnarvon, appointed receiver, June 26.

DUBLIN BRICK AND TILE CO., LTD. Meeting Stokes Bros. & Pim's, 36, College-green, Dublin, August 21 at 11, for an account of the winding up.

Order made on Application for Discharge.

LOWIN WM. H., late 58, High-st., Cheshunt, furniture dealer, upholsterer, and china and glass and fancy goods dealer. May 30. Discharge suspended three years.

Notice of Dividend.

STEWART ERNEST W., 26, Gloucester-st. and MARK T. STEWART, 24, Bracondale, trading as E. W. and M. T. Stewart, 54 and 56, Surrey-st., all Norwich, china, glass, and earthenware warehousemen. First and final, 5s. 3½d., at O.R.'s, Norwich.

Application for Debtor's Discharge.

WARDLE FRDK. C., 12, Arundel-rd., Oswestry, late trading at Stoke-on-Trent, as a debt collector, as the Potteries Accountancy Co., and as a china manufacturer at Longton in co-partnership with, &c. as &c. At County-buildings, Wrexham, Sept. 17 at 10.30.

Trust Deed Granted.

RUTHERFORD JNO., Duns, china merchant. Claims to G. Tweedie, Duns.

Appointment of Trustee.

DRYLAND RCHD., Smeeth, brick and tile manufacturer. Tr. R. J. Geering, Bank-st., Ashford.

Administration Order in the Case of a Deceased Debtor.

HANDLEY JOSHUA, late 86, Stafford-rd., and 19, Sidney-st., Sheffield, master glass cutter, died May 14, 1913. July 16.

Notices.

CALDWELL JAS., 169, Eglinton-st., Glasgow, glass merchant, &c. Business transferred, July 1, to Jas. Caldwell, jun., who will continue the business on his own account, and uplift all debts due to the business. All liabilities as at said date shall be discharged by J. Caldwell. (July 11.)

EMPORIUM (THE), COWDENBEATH (HY. GIBB SMITH). The china and hardware business has been sold, as at Whitsunday, 1913, to Wm. Smith, residing at Hillside, Fulford-rd., Cowdenbeath, who will carry it on for his own behoof under the same descriptive name, and will uplift all debts due to said business, and discharge the liabilities thereof, from and after the said term of Whitsunday, 1913. (July 1.)

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

** These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

(The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—Eds. P.G.)

Cutler Jesse, Woodbridge-rd., Moseley, glass and china dealer. Assignment upon trust, &c., with proviso for re-assignment on payment of 10s. in the £1 to creditors, at 3, 6, 9, and 12 months from date hereof, costs, &c. Dated, July 4. Filed, July 8. Liabilities unsecured, £439. Property after deducting secured claims, £350. Tr. C. T. Appleby, Corporation-st., Birmingham. A list of creditors appears below under "Private Meeting."

Stephens Jas. Hy., Gluman-gate and Gladstone-rd., Chesterfield, glass and china merchant. Dated, July 2. Filed, July 9. Liabilities unsecured, £552. Property after deducting secured claims, £420. Tr., H. J. Watson, Chesterfield. Secured creditors, £35. The following are creditors:—Anglo-Belge Glass Association, London, £3; E. Bowman & Son, London, £9; Cornthwaite, Robinson & Co., London, £8; Dornberger & Co., London, £4; C. J. Dams & Co., London, £21; De Greille, Houdret & Co., London, £21; Faudels, Ltd., London, £4; Griffiths & Millington, London, £20; C. Jones, Ltd., London, £6; Jonas Lang & Co., London, £23; H. Price & Co., London, £11; W. H. Best, Barnsley, £14; S. Grey, Birmingham, £21; S. Cook, Brierley Hill, £6; Harrop, Hammond & Co., Brierley Hill, £3; Burgess & Leigh, Burslem, £19; G. Hobson, Burslem, £16; S. Johnson, Ltd., Burslem, £5; Clokie & Co., Castleford, £4; Butters & Co., Chesterfield, £29; Wilfred Edmunds, Ltd., Chesterfield, £3; C. A. Furness, Chesterfield, £10; Pearson & Co., Chesterfield, £6; J. G. Shea (M.D.), Chesterfield, £7; E. Wright & Co., Chesterfield, £7; C. G. Broomhead (rates), Chesterfield, £10; Chesterfield Gas and Water Board (rates), Chesterfield, £7; W. Murphy (rent), Chesterfield, £4; Soho Pottery Co., Ltd., Cobridge, £12; J. H. Wetherby & Sons, Ltd., Hanley, £7; S. Bridgwood & Son, Longton, £10; British Anchor Pottery Co., Longton, £8; W. Hudson, Longton, £3; A. B. Jones & Sons, Longton, £5; T. Laurence, Longton, £8; Mayer & Sherratt, Longton, £8; Wileman & Co., Longton, £6; Burtles, Tate & Co., Manchester, £3; G. Shaw & Sons, Ltd., near Rotherham, £14; Stewart & Stewart, Sheffield, £5; W. T. Copeland & Sons, Stoke-on-Trent, £6; Johnson Bros., Ltd., Stoke-on-Trent, £7; Clay Bros., Stourbridge, £9; Rathbone & Co., Tunstall, £6; Wedgwood & Co., Tunstall, £17; Green Bros, Whittington, £6; E. Brain & Co., £19; rent, £21; banker's claim, £52.

Private Meeting.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

Cutler Jesse, Trent Pottery House, Woodbridge-rd., Moseley, Birmingham, glass and china dealer. At a meeting of creditors held on June 27 it was proposed to pay a composition of 10s. in the £, spread over a period of 12 months. The following are creditors:—Alexandra Porcelain Co., London, £14; H. Mayer & Co., Ltd., London, £29; Mrs. Brock, Bournemouth, £20; Bourne & Leigh, Burslem, £17; Doulton & Co., Burslem, £47; Allertons, Ltd., Longton, £21; W. Lowe, Longton, £21; Star China Co., Longton, £13; W. G. Copeland & Sons, Stoke, £22; Minton & Co., Stoke, £27; Josiah Wedgwood & Sons, Stoke, £26; Wiltshaw & Robinson, Stoke, £15; G. Jones & Sons, Ltd., Stone, £40; Muckley & Co., Stourbridge, £17; Booths, Ltd., Tunstall, £13. Liabilities, £410 5s. 5d.; assets, estimated, £306.

Bankruptcy Proceedings.

Calvert John James, traveller, late china dealer, 21, Henry-st., Coatham, Redcar, late 47, Newport-rd., Middlesbrough. R.O. June 26. Adj. June 26. The public examination of this debtor was held at Middlesbrough, on July 25, when the statement of affairs showed liabilities amounting to £99 13s., and assets estimated to realise £12 10s., money deposited for the costs of the petition, leaving a deficiency of £87 3s. Debtor stated that he opened the shop in Newport-rd., Middlesbrough, in September, 1911, and before that he had been an assistant in his mother's shop. Previous to this, however, he had been in business also as a china dealer in Linthorpe-rd., but it did not pay. The failure was due, he said, to the coal strike, which caused his business to fall off to a large extent. He had only kept a stock book and ledger, and the business, he admitted, had never paid, though he first became aware of his finanical position in December last. The examination was adjourned. The first meeting of creditors in this matter was held at the Official Receiver's office, Court-chambers, Albert-rd., Middlesbrough, on July 10. No resolutions were passed, and the Official Receiver remains trustee.

Dryland Rchd., Smeeth, brick and tile manufacturer. R.O. June 27. Adj. June 27.

Hemmings William Henry, Drayton-st., Wolverhampton, Stafford, and the Market Hall, Brierley-hill, Stafford, wholesale china and earthenware merchant. The public examination of this debtor was held at the County Court, Wolverhampton, on June 25, when he stated that he started in business 34 years ago, without capital, and bought a business 26 years back for £200, paying by instalments. Latterly he had a place at Brierley-hill. He did not think that in 1912 his takings averaged £100 a week. He had been in difficulties for from three to five years. The statement of affairs disclosed a deficiency of £1,197. He offered to pay 2s. 6d. in the £, but his creditors wanted 5s. He had not kept any books. Owing to the advance in prices he had lost from £5 to £6 a week during the past year. The Official Receiver asked for a goods account and a trading account, remarking that there was £1,500 unaccounted for on debtor's estimate of his stock at the beginning of the year and since. Debtor said he had lost £150 on a shop in Worcester-st., of which he did not remember the rent. In 1901 he had a fire, and recovered £980 from an insurance company; the value of the stock was £1,700. He had another fire in March last. He estimated the damage at £275, but only received £195 from the insurance company. It was pointed out that the loss on the second fire was put at £400. Debtor said he had a son in the same business. His son bought all his stuff from him. His son did not keep books. There was no record of their transactions. He sold cheaper to his son, being content with 2½ per cent. profit. The Official Receiver reminded debtor that he had stated he had sold below cost to other customers. Debtor admitted losing £40 or £50 on betting during the year. The examination was adjourned.

Lisemore Fred Hy., 31, Norman-st., Leicester, china dealer. R.O. July 15. Exam. The Castle, Leicester, Sept 12 at 11. Adj. July 15.

Wilshaw Harry, 35, Alcester-st., Redditch, Worcester china dealer, &c. The first meeting of creditors herein was held at Ruskin-chambers, 191, Corporation-st., Birmingham, on July 2, when the statement of affairs showed liabilities amounting to £234 2s. 3d., and assets estimated to produce £44 15s. 3d., the estate disclosing a deficiency

POULENC'S LIQUID GOLD

2 GRANDS PRIX—PARIS, 1900. | 2 GRANDS PRIX—ST. LOUIS, 1904.
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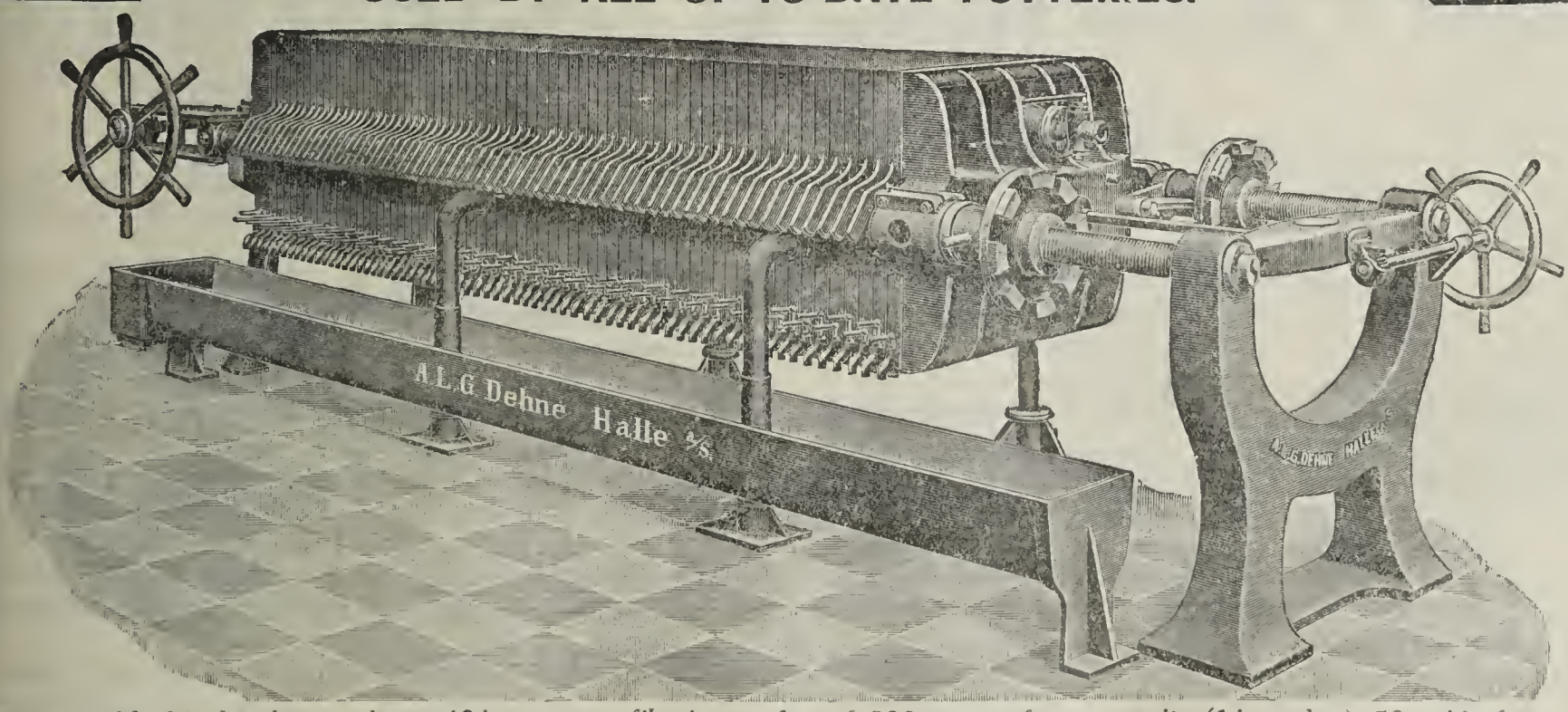
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of £189 7s. It appeared that the debtor commeneed business as a ehina and toy dealer at the above address, with £30 lent him by his father-in-law in November, 1911. The father-in-law subsequently advaneed further sums and was now seheduled as a creditor for £110. The business, whieh had been attended to by the debtor's wife, has apparently never been a suceess. Last November ereditors began to press, and an exeeution was levied reeently, when the debtor consulted his solicitors, who advised him to file his petition. Debtor had kept a cash book recording the daily takings only, and a ledger showing aceounts with debtors and ereditors. Debtor had never taken stock or attempted to aseertain his financial position, although he admits that he was aware that he could not pay all his debts in full soon after he commenced business. A small quantity of household furniture is elaimed by the debtor's wife. The matter was left with the Offieial Receiver. This debtor attended at the Court House, Corporation-st., Birmingham, on July 17, for his public examination. The debtor alleged that his failure was due to the faet that after starting business without capital he suffered from bad trade and severe competition. In reply to questions put by the Official Receiver, the debtor stated that his wife kept the shop and books, and he did not go into the affairs of the business. The business would have been elosed long ago had it not been for the father-in-law's advances. He borrowed £20 from a Birmingham moneylender, giving a promissory note for £30. He had also borrowed £5 from another moneylender, giving a promissory note for £7 10s. The case was adjourned for the signing of the shorthand notes.

New British Patents.

The following list has been compiled expressly for "THE POTTERY GAZETTE" by G. F. REDFERN & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

DECORATION OF GLASS, No. 13,621.—F. I. Gibbs. Decoration of glass and glassware. June 12, 1913.

EARTHENWARE DUCTS, No. 14,210.—C. Sharp. Manufacture of earthenware duets for electrie cables. June 19, 1913.

GLASS TILES, No. 15,353.—L. A. Garchey and A. Frey. Glass tiles. (Con. date, July 4, 1912, Germany.) July 3, 1913.

GRINDING POTTERS' MATERIALS, No. 14,303.—F. T. H. Goodwin. Grinding or milling potters' and like materials. June 20, 1913.

HANDLES FOR JARS, &C., No. 13,285.—R. J. Smith. Handles for jars and bottles. June 9, 1913.

JARS, No. 15,371.—E. Tilston. Jars and like receptacles. July 3, 1913.

REFRACTORY VITREOUS SUBSTANCES, No. 15,629.—H. G. S. Sand. Manufacture and production of refractory vitreous substances such as quartz glass and the like. July 7, 1913.

SIFTING APPARATUS FOR POTTERS' SLIP, &C., No. 15,514.—J. Teggin. Sifting apparatus for treating potters' slip, powdered substances and the like. July 5, 1913.

SUGAR BOWL, No. 16,127.—E. La Vine. Hygienic sugar bowl. July 12, 1913.

TUREENS, VEGETABLE, AND LIKE DISHES, No. 13,965.—W. H. Thorpe. Tureens, entrée, vegetable, toilet and like dishes. June 17, 1913.

Specifications Published.

1912.

28,001.—Morf. Method of producing bodies and coatings of glass and other substanees.

8,228.—Dressler. Ovens suitable for use in the manufaetnre of tiles, pottery, and analogous ware, and for other purposes.

12,749.—Kretzer. Manufacture of dulled glass, enamels, glazings, eeramie colours, and the like.

15,017.—Bishop. Compositions for fixing and securing tiles to walls, ceilings, and other surfaees.

19,670.—Preston. Dinner plates and the like.

21,232.—Moenck. Dishes.

18,054.—Bowden. Glass signs.

20,188.—Deitz & Laehtehiver. Seent and like bottles.

21,131.—Oates and Barber. Branch inlets for drain and other pipes.

14,940.—Schomburg. Socket and spigot joints for pipes.

22,658.—Bolton. Shaping of pottery.

28,092.—Chappny. Automatie transporting apparatus particularly adapted for transporting glassware in the proeess of manufaeture.

1913.

1,473.—Ralley. Jug with cover for holding milk and the like.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, *which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."*

615,913.—Sutton & Co., Union Potteries, Overseal, near Ashby-de-la-Zoueh.

618,080-1.—W. R. Grove, 5, Holywell-row, E.C.

619,018.—A. R. Muller, 56, Shernhall-st., N.E.

619,072.—Gibson & Sons, Ltd., Burslem.

619,150.—E. E. Gilbert, 176, Upper Richmond-rd., S.W.

619,151.—S. Fielding & Co., Ltd., Stoke-on-Trent.

619,274.—C. Twigg & Co., 72, Potters'-hill, Aston, Birmingham.

619,340.—The Dental Manufaeturing Co., Ltd., Alston House, Newman-st., W.

619,375.—W. H. Brooke, Deepear, near Sheffield.

619,557.—Glassworks Josef Inwald A. G., 69, Farringdon-rd., E.C.

619,636.—Grimwades, Ltd., Stoke-on-Trent.

617,380.—T. Sutcliffe, 6, Redston-rd., N.

618,285-6.—R. H. Quine, Sandy Grove House, Pendleton.

618,569.—H. H. Blanchford, 1, Fernleigh Villas, Rohais, Guernsey.

618,794.—F. Christiansen, 4, Cummings-st., Liverpool.

618,832.—M. J. Adams, Seotswood-rd., Neweastle-on-Tyne.

619,054.—T. C. Herbert, 22, Roderick-rd., N.W.

619,439.—Pountney & Co., Ltd., Fishponds, near Bristol.

619,558-60.—Worcester Royal Poreelain Co., Ltd., Worcester.

612,546.—Hyposol, Ltd., 62, Hilliard-rd., Northwood, Middlesex.

619,017.—A. R. Muller, 56, Shernhall-st., Walthamstow.

619,614.—C. Wilcox, 19, Gladstone-place, Hanley.

619,727.—B. Chandler, Hathwat House, South Littleton, Evesham, Woreestershire.

619,851.—S. Reieh & Co., 15, Clerkenwell-rd., E.C.

619,971.—M. Emanuel & Co., 41 and 42, Shoe-lane, E.C.

620,056.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.

620,057.—Wileman & Co., Foley China Works, Longton.

620,058.—The International Bottle Co., 108, Fenehurch-st., E.C.

620,109-10.—The Benjamin Electrie, Ltd., 1a, Rosebery avenue, E.C.

620,111-14 and 620,406-7.—C. E. Green, 49, Hatton-garden, E.C., and C. H. Bowers, The Beeches, Wolstanton.

620,115.—E. Emanuel & Sons, Ltd., 13, George-st. Manchester.

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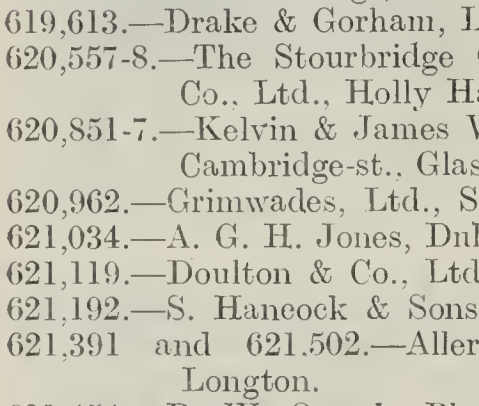
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Telegrams: "STOCKER, ST. AUSTELL." Telephone: No. 121.

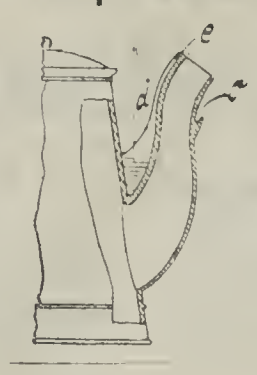
620,145.—Cauldon (Brown-Westhead, Moore & Co.), Ltd., Stoke-on-Trent.
620,189.—Forrest & Son, 11-25, Bishop-st., Anderston Cross, Glasgow.
620,375.—M. Emanuel & Co., 41 and 42, Shoe-lane, E.C.
620,443.—Allertons. Ltd., Park Works, Longton.
620,453.—C. H. Provis, Highfield, Mutley-rd., Mannamead, Plymouth.
620,458-9.—S. G. Hart, c/o E. Eugene Brown, M.I.E.E., Gwrdyr, 19. Eardley-rd., S.W.
619,019-20.—J. Bourne & Son, Denby Pottery, near Derby.
619,594.—Miss E. J. Duncan, Green Bank, Liphook, Hampshire.
620,020.—R. H. Thomson & Co., 15, Quality-st., Leith.
620,281.—W. T. Copeland & Sons, 3, High-st., Stoke-on-Trent.
620,286.—Hart Accumulator Co., Ltd., Marshgate-lane, E.
620,700.—H. O. Turner, 42, Ingleby-st., Birmingham.
620,744-5.—Marbella Illuminating Glass Co., Ltd., 1a, Rosebery-avenue, E.C.
620,868.—Worcester Royal Porcelain Co., Ltd., Worcester.
620,930-2.—Rheinsche Glashutten Ak. Ge., 46, Huttenstrasse, Koln-Ehrenfeld, Germany. Address for service, c/o Carpmael & Co., 24, Southampton-buildings, W.C.
619,613.—Drake & Gorham, Ltd., 66, Victoria-st., S.W.
620,557-8.—The Stourbridge Glazed Brick and Fireclay Co., Ltd., Holly Hall, Dudley.
620,851-7.—Kelvin & James White, Ltd., 16, 18, and 20, Cambridge-st., Glasgow.
620,962.—Grimwades, Ltd., Stoke-on-Trent.
621,034.—A. G. H. Jones, Duke-st., Fenton.
621,119.—Doulton & Co., Ltd., Nile-st., Burslem.
621,192.—S. Hancock & Sons, Wolfe-st., Stoke-on-Trent.
621,391 and 621,502.—Allertons, Ltd., Park Works, Longton.
621,454.—R. W. Orrock, Bleak House, River-rd., Barking, E.
621,503.—The Star China Co., Atlas Works, Longton.
621,504.—The International Bottle Co., 108, Fenchurch-st., E.C.

Latest Complete Specifications.

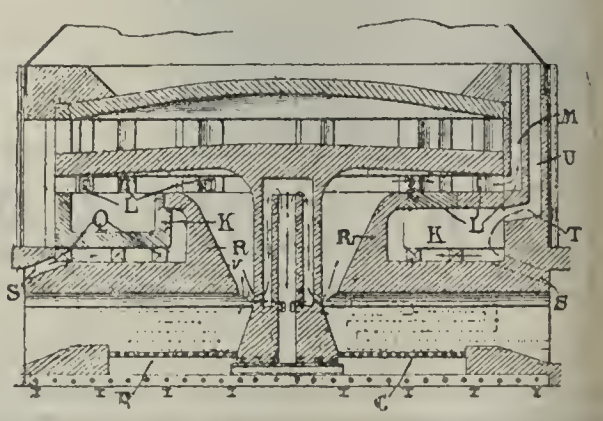
Joint for Connecting Pipes with Basins.—A. Ferguson, 6, Templemore-avenue, Belfast, declares this invention to be as follows :—The connection consists of two cast lead cones, inner and outer, made of softest light lead with a lead flange cast on inner cone. To make the joint—the inner cone is inserted into horn of basin putting a little paint or putty round it before insertion. Press home flange to shoulder of horn ; take a plumber's wiping cloth and holding end of cone with left hand, press into place with the cloth, the lead which projects over the beaded edge of the horn. Then slip the outer cone over end of lead pipe ; tumpkin the end of lead pipe, making it bell-shape and then insert it into other end of inner cone, which has been already attached to the basin. Grip end of cone or basin and apply the wiping cloth with pressure as before and so press down lead of inner cone over shoulder of bell-mouthed pipe. Now slip into position the outer cone, the smaller end gripping on the shoulder of the "belled" pipe and wide end passing over rounded head on horn of basin, projecting a little, which projection is pressed with the wiping cloth into position round the edge of horn until it has got a perfect grip. This makes a perfectly tight and neat joint without the presently employed methods of using string, wire, cement, cloth, rubber, or screws.



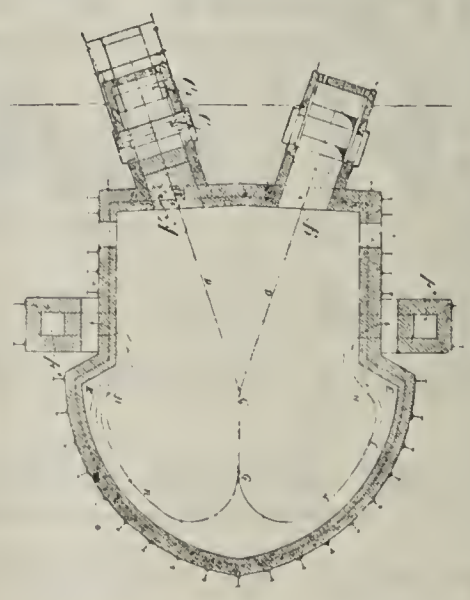
Drop Catcher for Teapots and the Like.—(Ger. Pat. 255,096. Gebr. Schlingmann, Bremen.) A small open channel, *c*, arranged in the known manner in front of the lower edge of the spout, and either made in one piece with or firmly secured to same, slopes downward toward the back of the spout, on one or both sides, into a collector, *d*, at the back of the spout. From this collector the liquid flows along a groove, *e*, when the pot is tilted to empty it.



Glass Furnace (C. Royer, Givors, Ger. Pat. 251,357).—The melting tanks K, of masonry, are mounted on supports Q, and arranged uniformly around the central flue, the supports Q leaving a space for a cooling current between the tanks and the bottom of the furnace. Similar spaces are provided between the sides of the tanks and the annular hearth wall R, and are closed at the top by a horizontal cover. Heat is supplied from the upper space in the furnace exclusively, by radiation from the vault, which is heated by the gases ascending from the hearth, the fireplaces B and C being provided for that purpose. The hot gases pass through openings V into the chamber O, and raise the temperature of the vault to such a point that the radiant heat melts the charge, after which the gases pass away through openings L into the flue M. The cooling current of air is produced by natural draught, and enters through the openings S underneath the tanks, to be drawn off through the outlets T into flues U, which run parallel with M, and are heated thereby so as to set up a strong draught.



Glass Furnace.—(Ger. Pat. 252,393. J. E. and H. Flack, St. Ingbert, and E. Niedhammer, Illertissen). —The furnace is characterised by the arrangement of two or more burners, A, B, set at a relative angle and disposed symmetrically with relation to the longitudinal axis of the furnace, said burners being provided with closing slides, C, C, whilst the products of combustion are led away through two or more flues, F, placed in the side walls of the furnace.



United States Imports of earthen, stone and china ware were valued at $2,045,000 during the first three months of 1913. The value, though still on the light side, shows an improving tendency.

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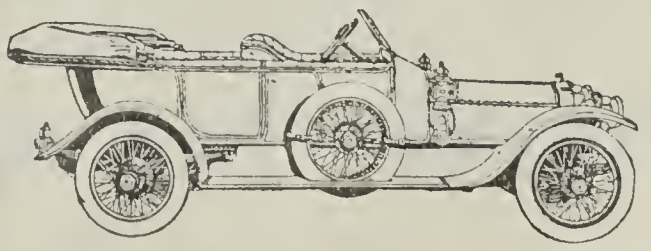
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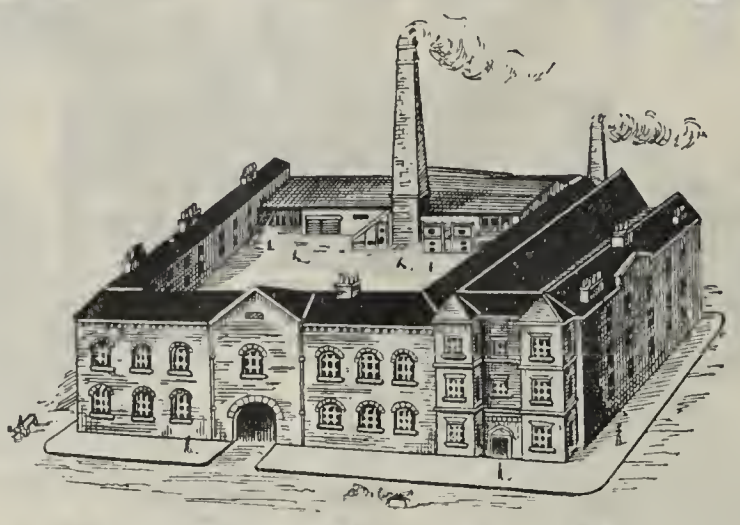
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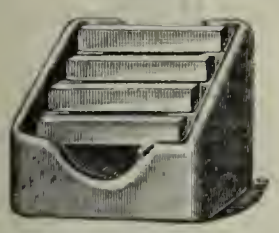
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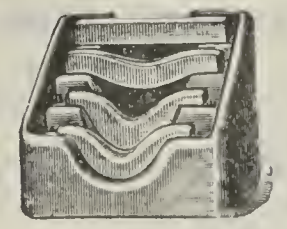
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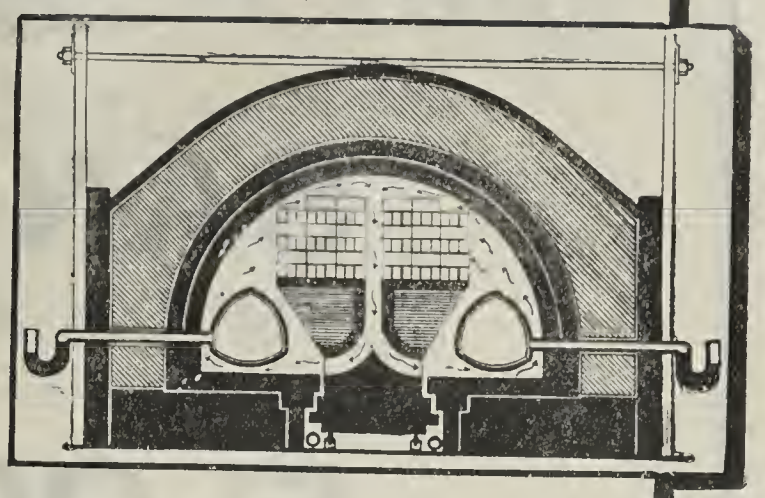
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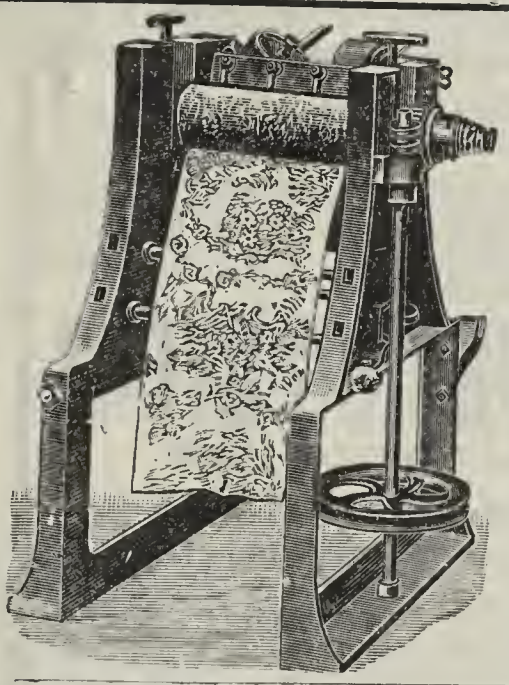
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SAARAU, GERMANY (Province of Silesia),
RECOMMENDS ITS
TUNNEL BURNING OVENS
After the FAUGERON-MONTEREAU SYSTEM,
To CHINA AND EARTHENWARE FACTORIES.
ENGLISH PATENT No. 13,386 of June 15, 1898.

The Ceramic Tunnel Oven Building Company, Ltd., undertakes the **building of tunnel burning ovens, QUITE READY FOR FIRING UP,** and gives **particulars in respect of building, costs, and working,** on application.

The Tunnel Oven is the **most economical** Burning Oven as regards consumption of fuel, the saving amounting to 50 per cent. and more; its **working** is the **simplest** and **easiest** one for the work-people.

The consumption of saggars is reduced to an extraordinary extent, the disagreeable **smoke nuisance** of the old burning ovens is done away with, and the goods to be burned are got ready in a short time, as the burning only takes from about 50 to 54 hours while continuously working.

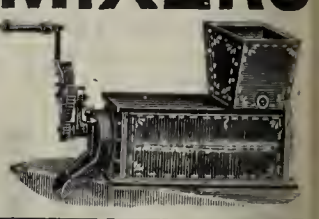
At present there are at work for Porcelain, Stoneware, and Fire-clay manufacture, **16 Ovens;** in construction, **3 Ovens,** amongst which one for Mosaic-plate manufacture.

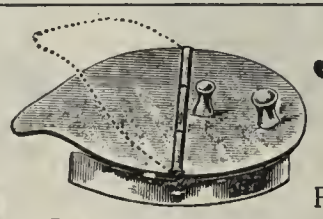
FIRST-CLASS TESTIMONIALS at disposal.

Such ovens may be viewed in actual work, if a previous arrangement be made with

KERAMISCHE TUNNELOFEN-BAUGESELLSCHAFT m.b.H.,
SAARAU.

GARDNER'S Patent "RAPID"
SIFTERS AND MIXERS
SUCCESSFULLY TREAT ALL POWDERS.
PRACTICALLY DUSTLESS IN WORKING.
SIZES FOR HAND OR POWER USE.
USED BY LEADING POTTERY AND GLASS WORKS.
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(GLOUCESTER), LTD., GLOUCESTER.





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THESE FANS ARE OF STRONG CONSTRUCTION, RUN SMOOTHLY, AND ARE EXTENSIVELY USED FOR VENTILATION, ETC.

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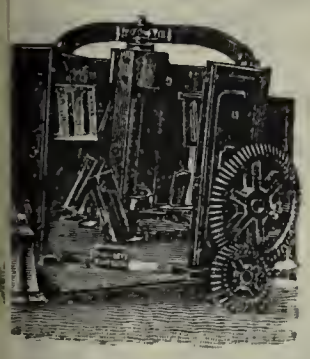
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Potters' Engineers, Iron & Brass Founders, Millwrights, and Tool Manufacturers.

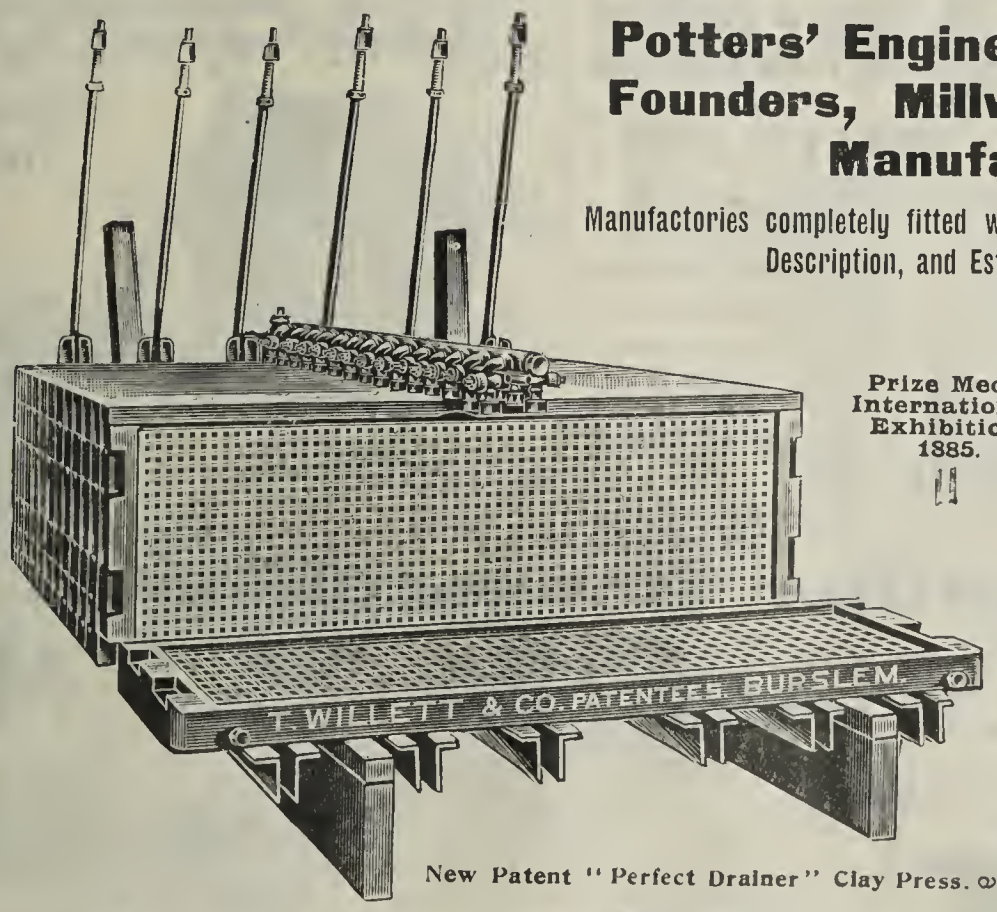
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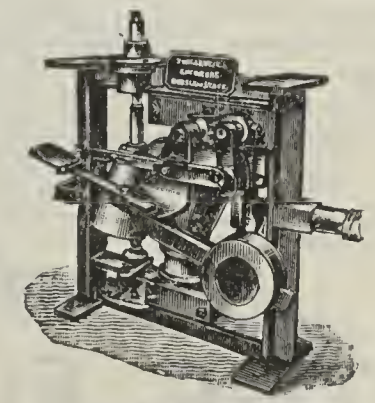


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New Patent "Perfect Drainer" Clay Press.

Prize Medal International Exhibition, 1885.



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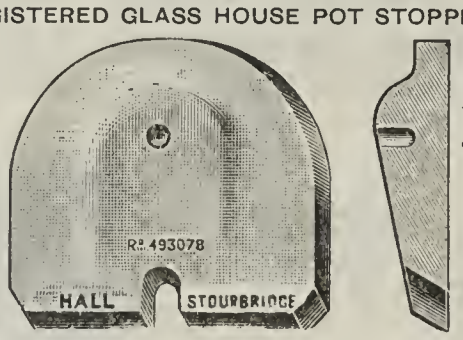
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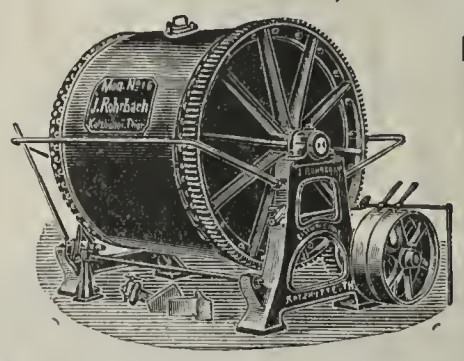
Thickness being increased around the lifting hole render these less liable to break in removing.



Bottom Edge being bevelled instead of flat prevents adhesion to the Pot or Metal.

J. ROHRBACH, G.m.b.H.

EST. 1563. ***Engineering Works,*** EST. 1563.
KATZHUTTE, Thuringia, GERMANY.



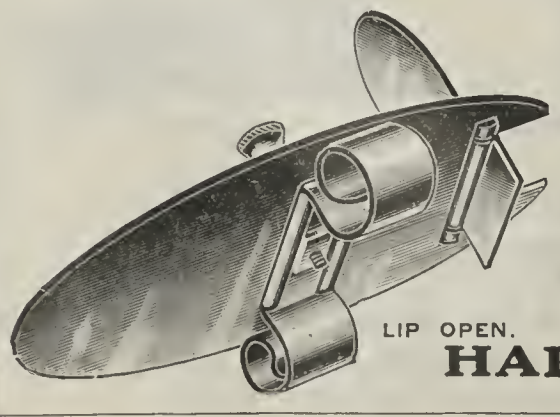
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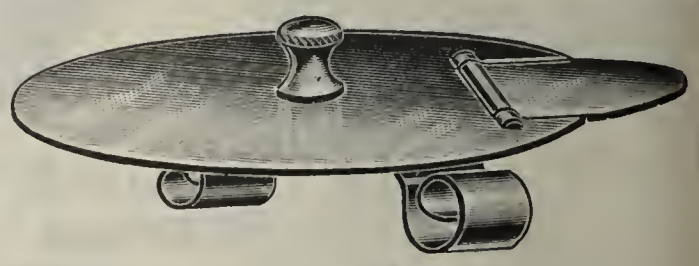
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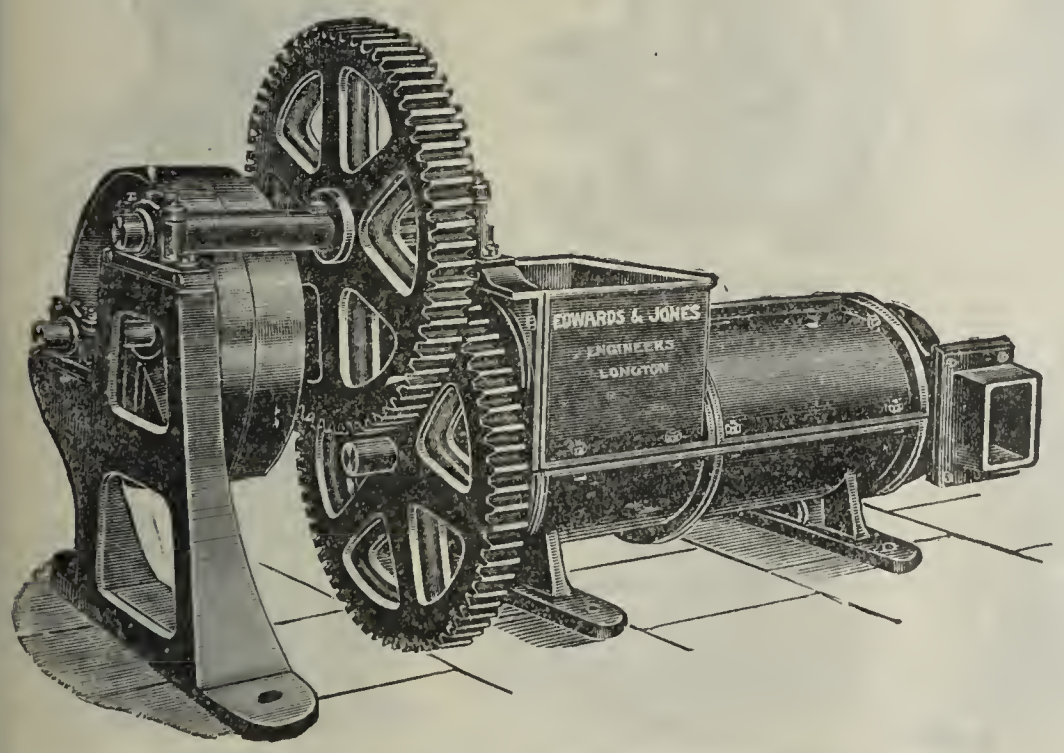
Telephone: 5526 Victoria.

Telegrams: KILNCONCO Sowest London.

EDWARDS & JONES,

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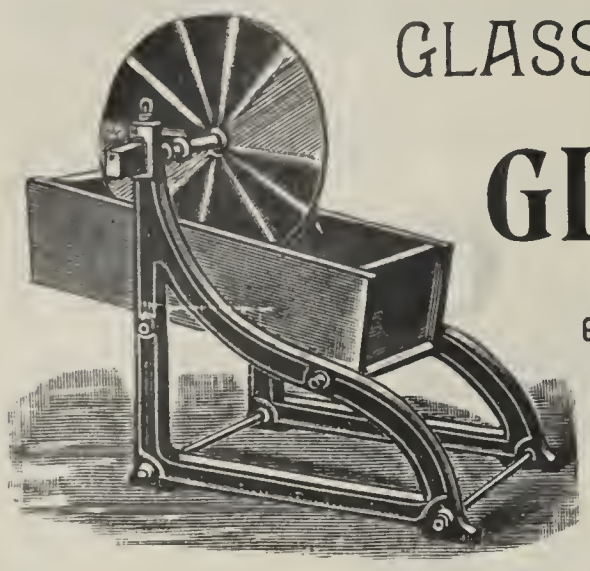
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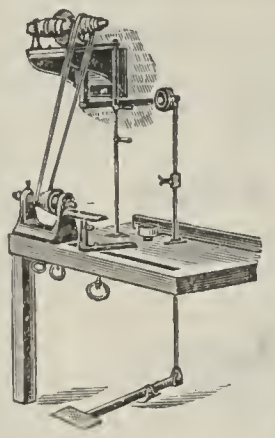
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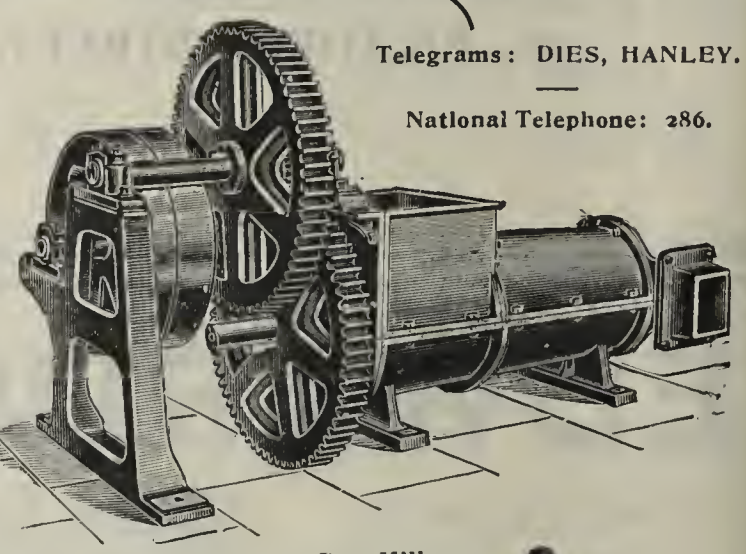
Atlas Foundry, HANLEY, Staffs., ENGLAND,

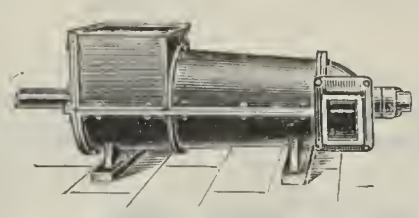
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National Telephone: 286.

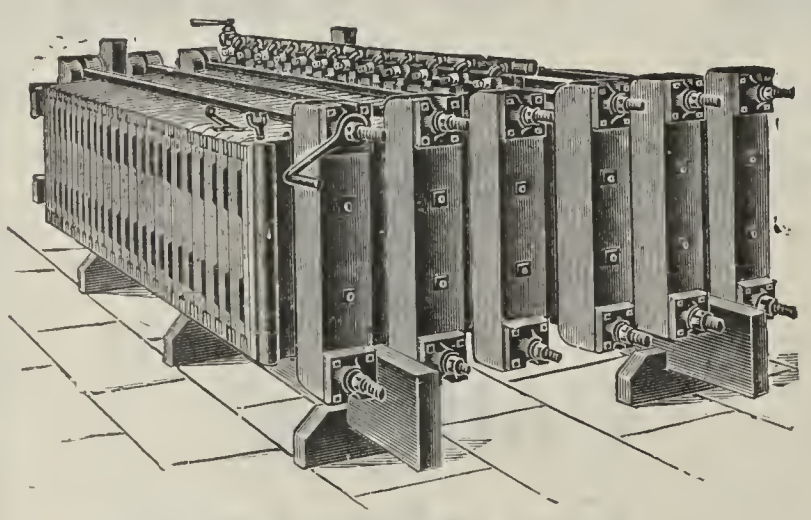
Potteries and Tile Manufactories fitted up complete with the most modern machinery.



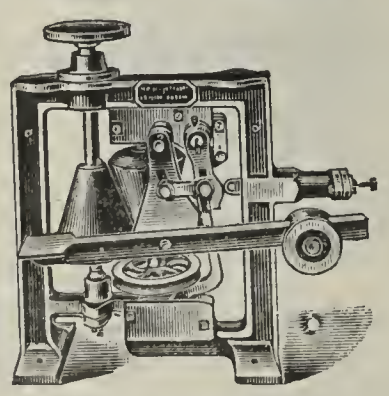


Pug Mill (without Gearing).

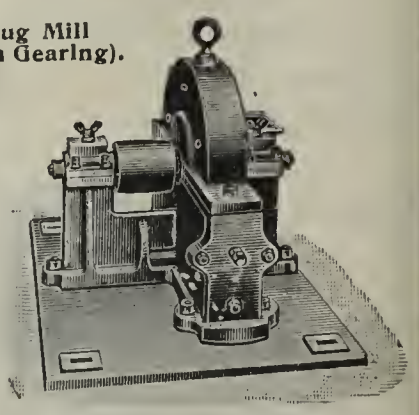
Pug Mill (with Gearing).



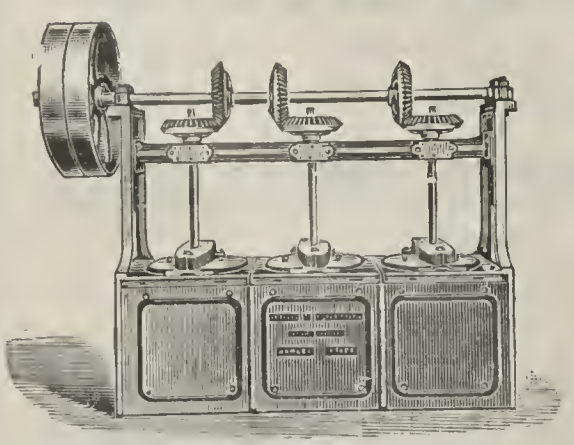
Filter Press.



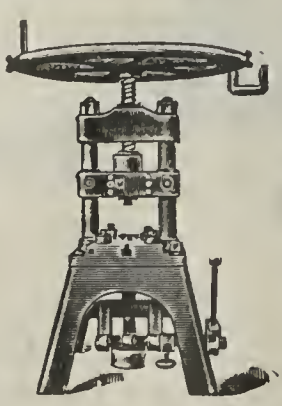
Throwing Wheel.



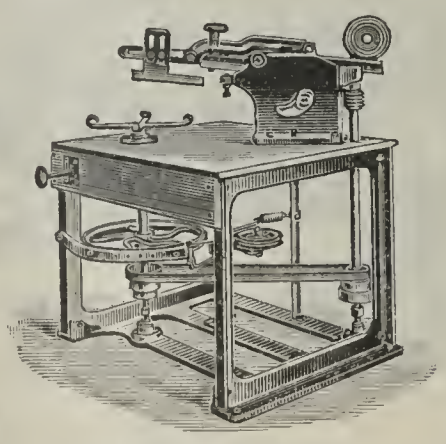
Damped Clay Disintegrator or Dust Mill.



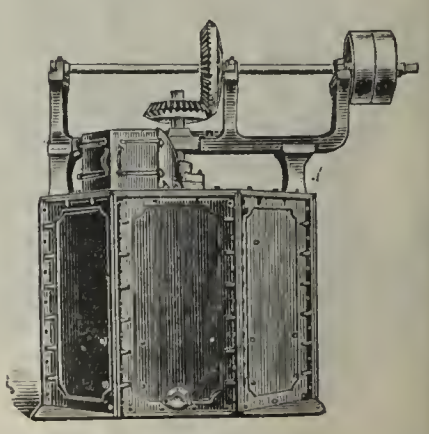
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All announcements for this Heading for October issue must reach us by first post on September 27th.

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(CONTINUED ON PAGE 976.)

4755

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continued from page 974.

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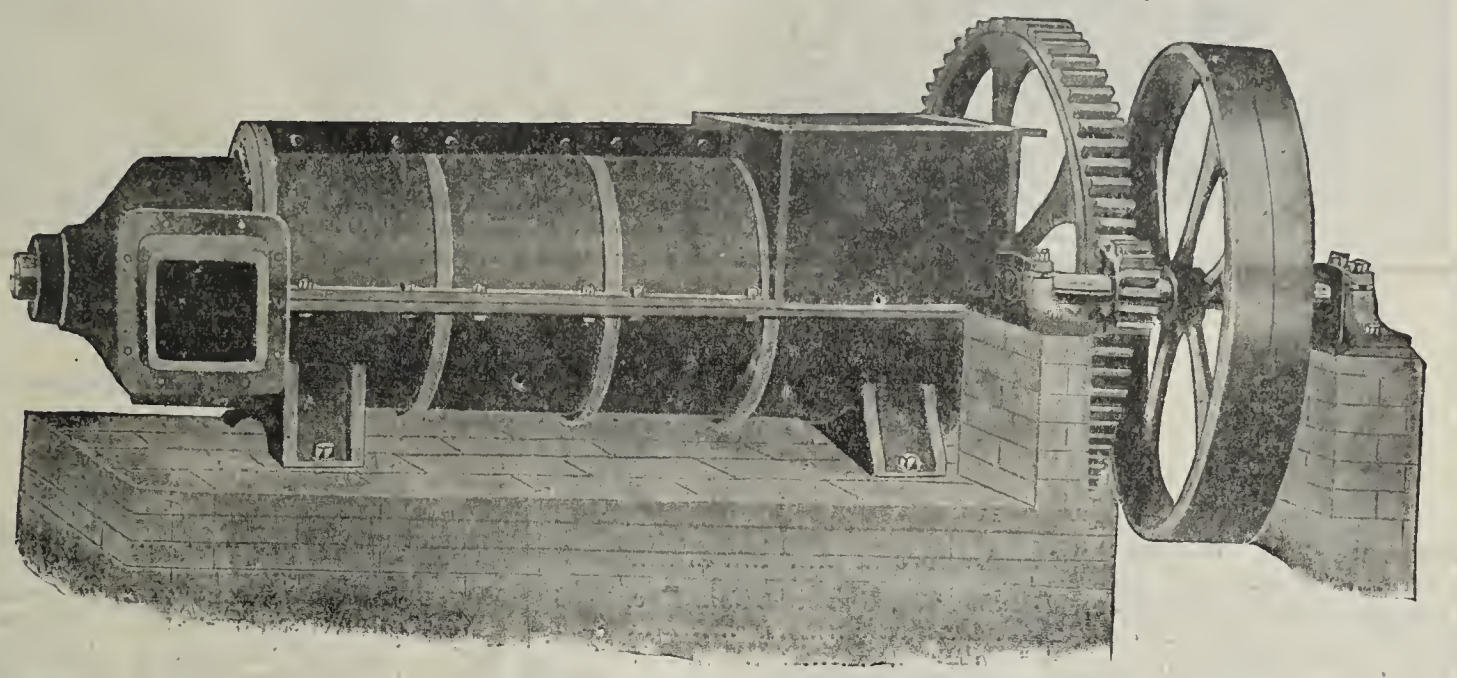
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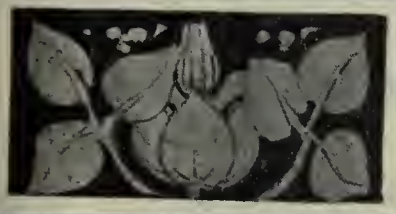
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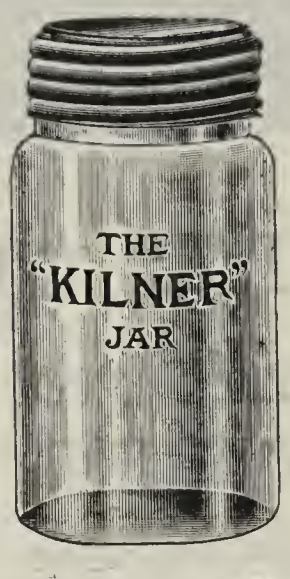
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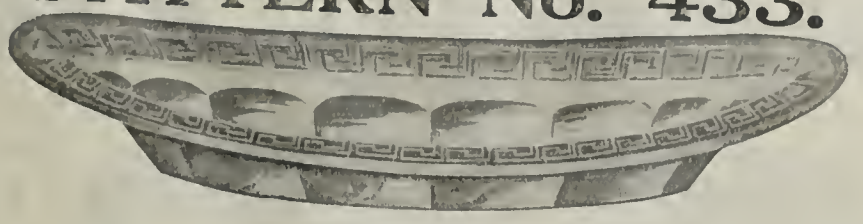
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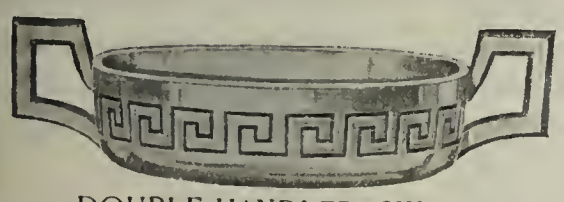
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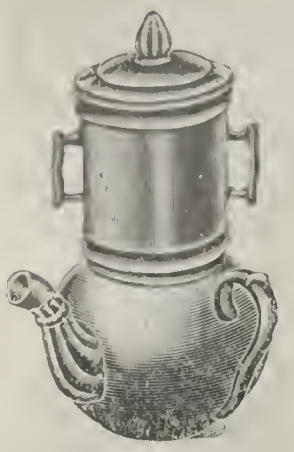
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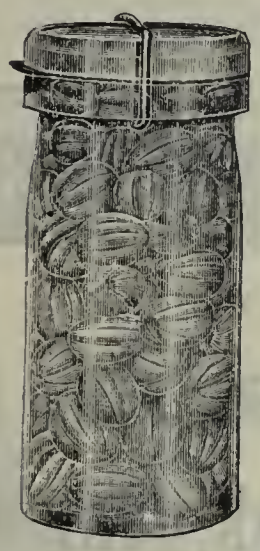
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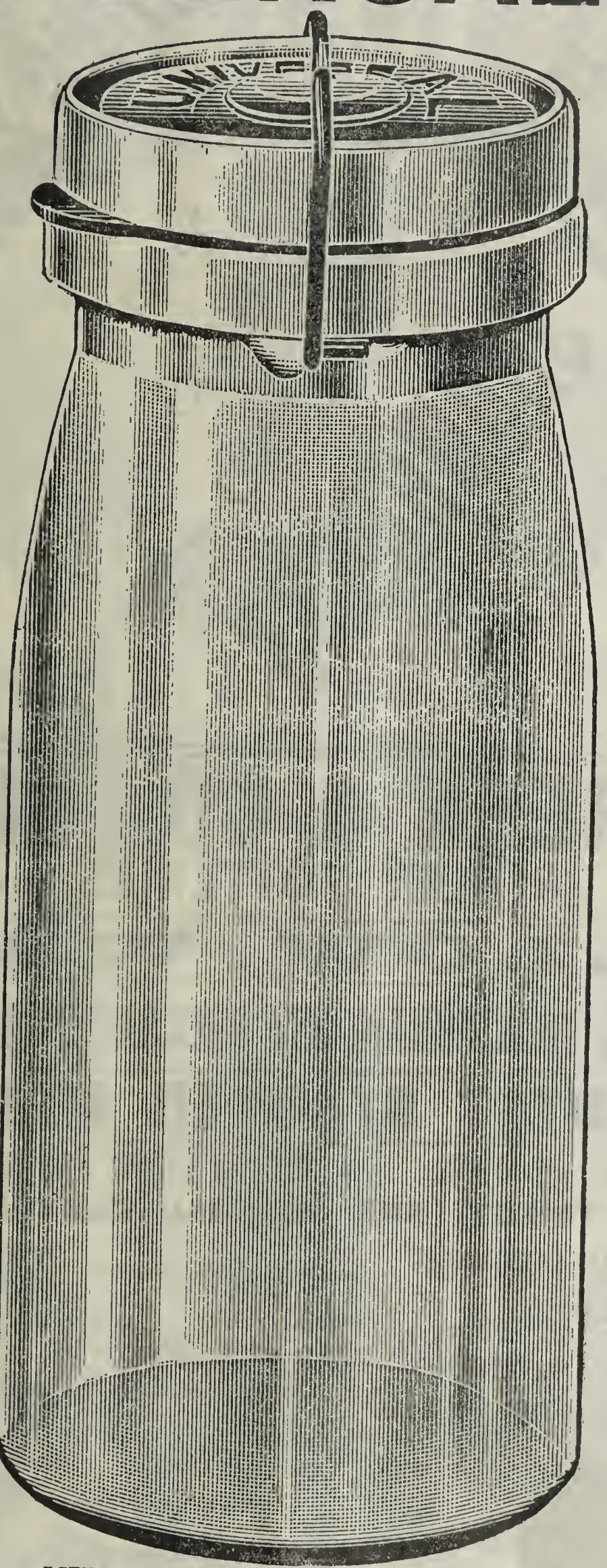
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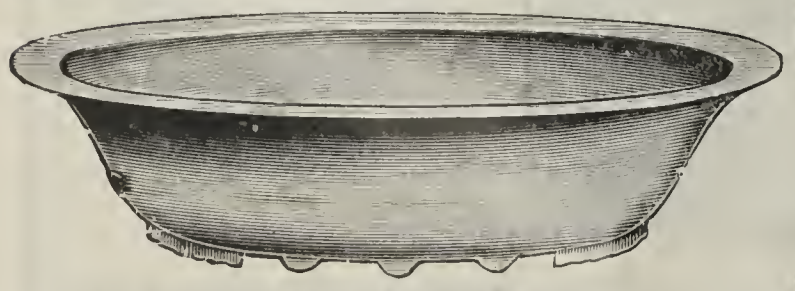
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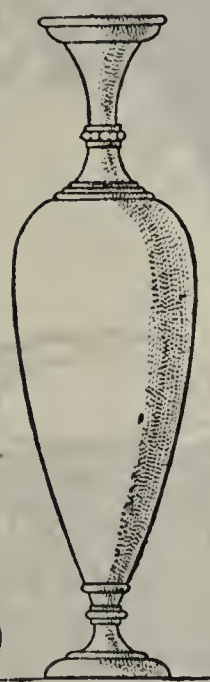
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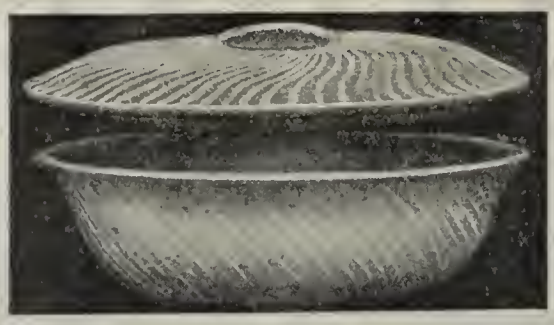
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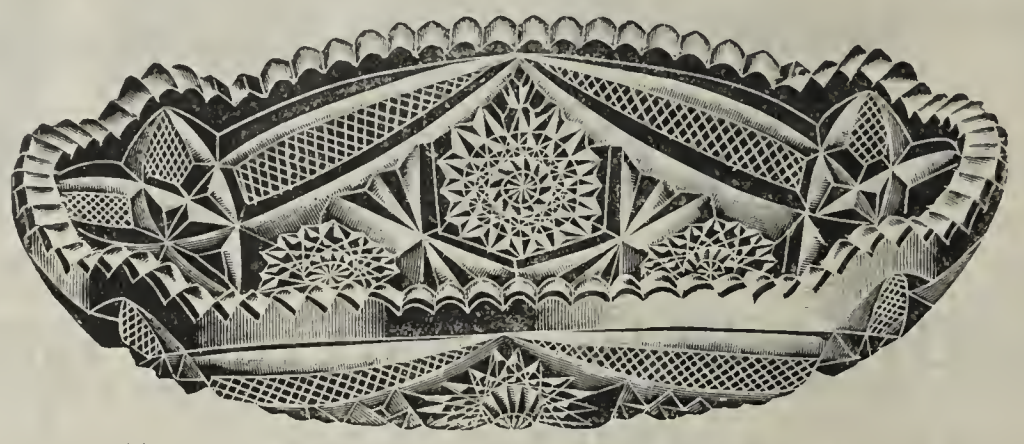
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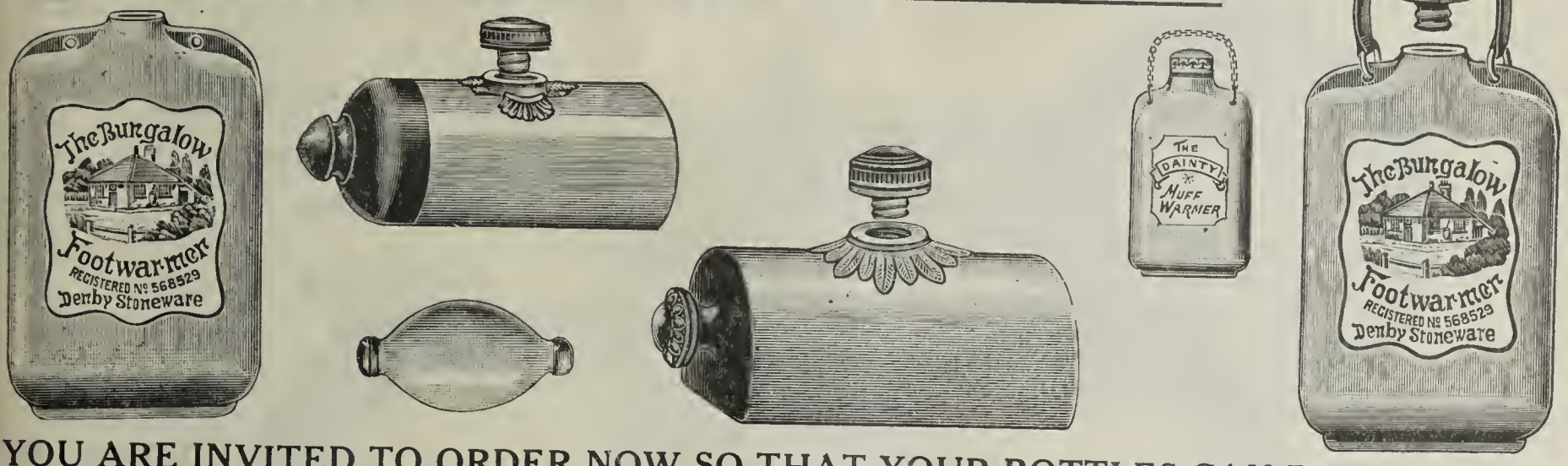
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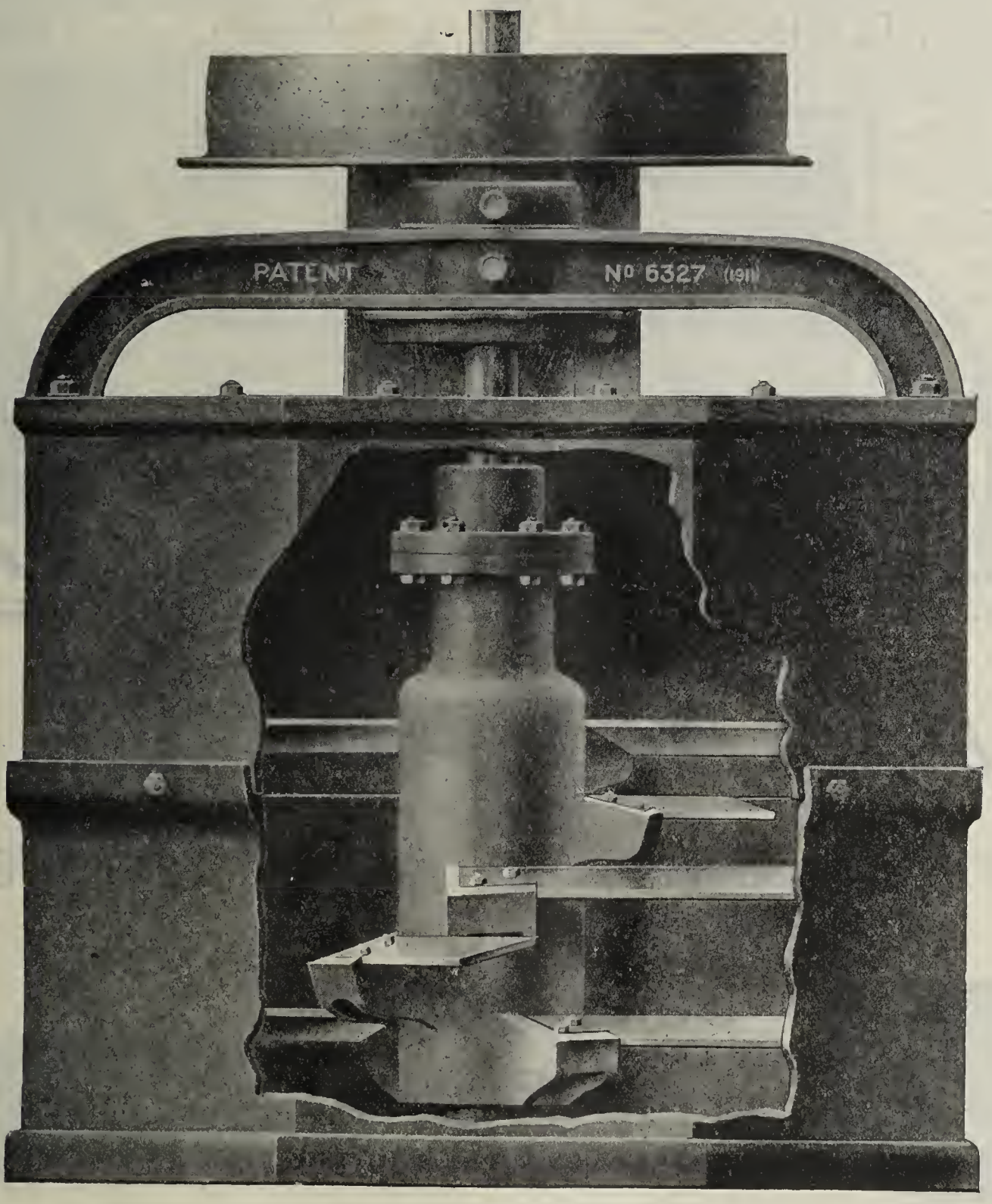
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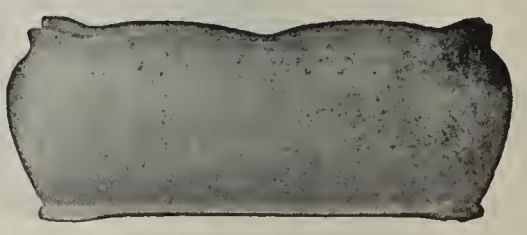
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Editorial Notes.

HOW TO TREAT TRAVELLERS.

SOME buyer of the old school may be puzzled by this heading, considering that it is the traveller's place to treat him; but it is to "treatment" and not to "treating" that we refer. The majority of dealers in the pottery trade are we, know, cultured and courteous gentlemen who would be incapable of incivility; but we fear there are a few exceptions, as a representative of a leading firm of china manufacturers has sent us a cutting from a provincial paper in which the following passage is strongly marked :—"I can never understand the buyers in big business establishments whose duty it is, mind you, to buy, treating badly the people who come to sell them merchandise. I have heard of cases where honest, hard-working commercial travellers have been asked by boorish buyers to wait for two hours, and then be turned away with the curt announcement that they are too busy to see them. This sort of conduct, besides stamping such men as ill-mannered fellows, is rank bad judgment from a business point of view. It means making potential enemies, and it means negativing any future opportunity of those commercial travellers being of service to the business. It never pays in business to despise any one, for in business one never knows whither the interlinking may lead." The vigour with which the pencil lines indicating this paragraph are scored shows that the sender endorses them most thoroughly. So also do we, and we are slow to believe that they could fairly be applied to many of our readers. Apart altogether from the higher grounds of courtesy and good manners, it is bad policy from a business point of view to treat a traveller rudely. It is far better to see what he has to offer, and, if it is not convenient to place an order, at least to tender a polite refusal.

CULTIVATING FOREIGN TRADE.

IN the midst of the prevailing slackness in the Potteries we have been pleased to learn that one firm at least has kept busy even up to the point of having to decline orders. It is worthy of note that this is a firm which has given particular attention to the development of its trade abroad. We have good reason to believe that there are yet many promising markets for British pottery in foreign countries if only the makers will take the trouble to seek them out, and supply them with suitable goods. For instance, a British consular report from Palestine states that "Porcelain is generally imported from Bohemia, Austria-Hungary, as it is cheaper." Not long ago we published an article indicating the requirements of the Syrian market, and we have no doubt that our friends in the Potteries could, if they desired to, meet those requirements and so extend their trade in this direction. In another British consular report relating to Greece is the paragraph "During the last few years British earthenware goods have been steadily gaining ground, and will soon take a prominent position, as they are found to be better glazed and stronger than foreign goods; but only the cheaper descriptions can be profitably

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imported, as the import duty on chinaware and elaborate patterns intermixed with gold is, so to say, prohibitive.'' Despite the competition of Germany, one cannot but believe there is still room for an extension of the English pottery trade on the Continent—on this ground of superiority. During a recent holiday in Switzerland one of our contributors was impressed by the vast market for pottery provided by the countless hotels. For the area of the towns and villages there are surely more good-class hotels there than in any other part of Europe. Our friend pleads guilty, like most Potteries people, to having examined the underside of more than one piece of ware, and he was agreeably surprised to find many English names. Nevertheless, there is in use a great quantity of German pottery. Much of it is very good, but it will not stand comparison with the Potteries-made article for quality, and doubtless for durability, too. '' Of course,'' he adds, '' the Germans have an immense advantage because of the proximity of their factories and the lower railway rates, but if every hotel-keeper could be made to see the two classes of ware as we see them, there would not be much doubt as to the English having the preference. In the shops one chiefly saw German goods, and one thing was certainly striking, namely—the effective simplicity of the decorations of ordinary articles of utility, and particularly toilets. The German style of severe ornament certainly seems to have caught on there. Another thing was noticeable—the comparative absence of souvenir ware. Is it possible that there is still a market open for tasteful bits of pottery reminiscent of visits to that delightful country ? '' When we add to the above the simple fact that in 1911, the last year for which figures are available, the value of the porcelain and china imported into Switzerland was £153,000, of which the United Kingdom's share was a mere £29,000, it must be evident that there is an opening for further British trade. We have endeavoured in the past to give a few hints as to how some of the great opportunities abroad may be realized by our manufacturers, and we hope to continue to do from time to time.

POTTERY EXPORTS IN JULY.

THE exports of pottery in July were of practically the same value as in June, but they showed a considerable advance over the corresponding month of last year. The July figures were £295,705, as against £264,906 in the same period 1912, and £216,304 in the same period of 1911. The Canadian shipments were of the value of £49,696, a very substantial sum, but only a few hundreds better than in the corresponding month of last year. The American business, at £31,417, showed a further decline both on the preceding month, and on the same period of last year. The Brazilian exports fell from £25,569 in June to £21,931 in July, though this was £4,000 better than in the same month of last year. Shipments to the Argentine reached an aggregate of £34,991, an advance of £10,000 as compared with the same month a year ago. The East Indian and South African exports were better than they were twelve months since, but the former were not up to the June standard. The Australian business dropped from £28,339 in June to £24,938 in July, though the latter figure was 000 better than in the same month of last year. New Zealand took £9,665 worth of goods, as against £7,785 the same month of 1912. For the seven months the aggregate exports were £2,003,282, compared with 633,212 in the corresponding period of last year, and 715,043 in the same months of two years ago. More than half the seven months' exports were represented by Earthenware. The most notable increase for the period was in respect of sanitary ware, the advance being from £270,589 in 1912 to £342,900 this year.

Imports in July were of the value of £91,798, as against £88,176 in the same month of last year, and £78,878 in the same month of 1911. The seven months' imports aggregated £609,441, compared with £538,563 in 1912, and £581,273 in 1911.

THE " UNSUCCESSFUL " SAMPLE.

NO one who is in the habit of keeping an eye on the results of auction sales concerned with antique china, earthenware, and porcelain can help reflecting on the remarkable way in which single specimens of the earlier makes of renown have enhanced in value in the course of a generation or two. It may not, however, have occurred to all of us that the process of evolution is uninterrupted, and that being so, it would be perfectly reasonable to assume that an individual example of any of the famous modern makers, carefully preserved for a few decades, may in a remarkable and almost inexplicable way so augment in its inherent value as to become not only increasingly precious as a family possession, but advancingly lucrative as a marketable commodity.

Perhaps in no department of the glass and china trade might this fertility of increase in value be turned to better account than in the '' unsuccessful '' and relegated sample. It is no news that the magnificent showrooms of some of our leading manufacturers become from time to time so congested as a result of the assiduous activities of an army of designers, that annual, or at any rate, periodical clearances of '' unsuccessful '' samples are perforce made. At such times a wealth of variety of specimens can be obtained at a price often considerably less than the cost which has been entailed in their production. Frequently some of these specimens are truly magnificent, and have been dubbed '' unsuccessful '' without, may be, having been fairly exploited, the right market not having been tapped. This, however, opens up another line of thought which may be reserved for discussion at some future date. The point specially to bear in mind just here is that these '' job '' samples are often the only existing examples of a particular and definite mood or inspiration of the artist, who may be not only skilful but celebrated, or at least destined to become so. Usually the piece has been finished off entirely by hand, as the expensive process of engraving is not as a rule resorted to until the design has been shown to justify its introduction commercially, a '' consummation devoutly to be wished,'' but frequently not attained owing to a combination of circumstances, some of which might possibly be avoidable. Now, if these original samples were postage stamps we should expect to find philatelists from all corners of the earth rushing, so to speak, for the early doors.

The suggestion arises : Is it not possible that herein lies a comparatively unexplored field for ceramic connoisseurs, as well as a possibility of an uncontemplated revenue for manufacturers and dealers ? We venture to think that if only a moderate measure of thought were devoted to the matter by collectors, manufacturers would not be compelled as at present to sell these veritable works of art in full consignments to the seconds contractor, to be handled, through the operation of a very simple commercial transaction, by the market stallholder and the pedlar. It would further seem that the common practice of writing off periodically large amounts from the sample accounts of manufacturers' agents might not be inconsiderably mitigated, if not entirely reversed, by a little judicious scheming in a direction which appears to offer a rich scope. Without wishing to appear dictatorial, it would

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etc., etc.



STOKE-ON-TRENT, ENGLAND.

ertainly seem that at present there exists in many quarters regrettable and wanton waste of the resources of pottery rtists, and a corresponding and directly traceable adverse ffect upon private profits and company dividends. In iese directions everyone must feel that there is always oom for conservation.

But there is another aspect to the matter. It may e that some of these "unsuccessful" ideas have been designated because they have been merely ill-timed, nd that, withdrawn and reintroduced at a more opportune ioment, even though it were only a decade hence, they ight rise Phœnix-like from the ashes of obscurity into ie limelight of fame and celebrity. Fashions, we all dmit, are fortuitous; hence, there is the further suggesion that every manufacturer might be well advised to stab'ish his own museum, in however humble a way, herein at least one piece of every new series of samples, iccessful or otherwise, might be preserved for the benefit f the rising generation. The tendency of the present ge for the revival of styles of bygone periods seems to iggest that such a course as the one indicated is vitally ecessary, and it would certainly serve the further purpose successfully combating in years to come any suggestion iat early twentieth century decorative art was not eative. Meanwhile, might not the value of such pieces e steadily increasing?

BRITISH TRADE WITH CENTRAL AMERICA.

ON the recommendation of the Advisory Committee on Commercial Intelligence the Board of Trade, towards the end of the year 1911, appointed Mr. G. T. Milne to be a Special Commissioner to inquire into the conditions and ospects of British trade in the Central American Reiblics and in Colombia and Venezuela. The work of e mission was completed early in the present year. ie reports on the trade of the various Republics furshed by Mr. Milne have just been published in the form a Blue Book, and we have abstracted the sections ith which our readers are chiefly concerned. The samples ferred to in these reports may be inspected by British anufacturers and shippers of British goods at the Comercial Intelligence Branch of the Board of Trade, 73, singhall-street, E.C.

GUATEMALA.

Glass.—Glass in sheets comes mainly from Belgium id Germany, while the latter country has the principal are in the import of mirrors. These are also, however, ade locally, the gilt and other mouldings being of erman make. Duties on plain glass are 3 cents per kilo., id on mirrors with frames of wood or composition, brass, ic, tinplate or white metal, 50 cents per kilo. (on gross eight). High rates are willingly paid by importers r special packing in order to reduce losses through eakage. One importer informed me that he had brought ided lights, tinted glass, from England in small quantis, but he finds that it comes from 20 per cent. to 25 r cent. cheaper from Belgium. He had a good word to y for our packing. Common bottles mostly come from ermany. The duty on these is 1 cent per kilo. Glass d porcelain lamps are mostly of Continental make, ile those of metal are mainly American.

China and Earthenware.—These are grouped with assware in the official returns. Recent imports have en:—1908, 549,227 kilos., value £12,601; 1909, 375,216, ,520; 1910, 448,049 kilos., £9,333. Germany has the gest share in this trade, while the United States, France d Belgium also participate. The British share is relatively unimportant. There is possibly a field here for English crockery, but it is essential that it be light on account of the duties, which amount to 10 cents per kilo. on the gross weight. It must at the same time be low in price if it is to compete successfully with foreign makes. The greatest attention must also be paid to packing, on account of the rough handling to which all goods are subjected in Central America. I forward the following samples:—No. 1, soup plate (German), No. 2, meat plate (German)—cost m.9, less 5 per cent. f.o.b., Hamburg; No. 3, meat plate (German), cost m.6.75, less 5 per cent. f.o.b., Hamburg. Nos. 1 and 2 sell in the capital at $18., and No. 3 at $15 currency per dozen. No. 4 bowl (French), costs 57 cents gold per dozen; No. 5 bowl (Belgian), costs 60 cents gold per dozen; No. 6 bowl (German), costs 61 cents gold per dozen.

Baths and Sanitary Fittings.—There is an increasing demand for these, which is being met from the United States. British manufacture in this line, although recognised to be the best, is much too expensive for this market. A well-known English house recently lost an order because it could only offer installations at more than double the prices quoted in the United States.

SALVADOR.

Chinaware and Earthenware.—The average annual import for the period 1908–10 has been about £6,500, Germany supplying 84 per cent. of the total. There is a big demand for cheap cups, bowls, and plates. The essentials for the market are low price and light make. In sanitary ware there is some sale for that of British manufacture, but probably the greater part is of United States manufacture.

Glass.—In the official returns all glass is entered under the general heading of glassware. During the period 1908–10 the annual imports averaged about £3,800. Of this Germany had 53 per cent., followed by the United States, Belgium, and France. Soda water bottles are imported from the United Kingdom and Germany, the cost from both countries being the same.

HONDURAS.

Chinaware and Earthenware.—The value of the imports was a little over £3,000, consisting almost entirely of common earthenware. Germany supplied 40 per cent., the United States 42 per cent., while the greater part of the remainder was British. The duty on common earthenware is 5 cents, and on chinaware 10 cents.

Glass.—The import of glass for windows, &c., is small, being only about £500. The duty is 5 cents. The small imports of looking-glasses (duty 15 cents) were mainly German and American. Glassware of the better kind is Austrian, but the demand is small. The import of bottles (duty 2 cents) amounted to about £350. The United States and Germany shared this trade. Lamps of all kinds (duty 10 cents) are grouped together in the official returns, but practically all of the imports, amounting to a little over £1,000, were American.

NICARAGUA.

Chinaware and Earthenware.—The imports were valued at only a little over £1,000, but possibly owing to the method of classification adopted, this may not represent the total. Germany and the United States had most of the trade, followed by the United Kingdom. Duties vary from 4 cents to 30 cents.

Glass.—The demand for window glass is very limited. Imports of glassware were under £1,000, the greater part being German. Duties are 15 and 25 cents. The small import of common glass bottles (about £450 worth) was mostly American and German. The duty is 3 cents. Glass, porcelain, and metal lamps were mainly of United

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States make, the value of imports being a little over £500. Duties are from 15 cents upwards.

COSTA RICA.

CHINAWARE AND EARTHENWARE.—The following have been the imports of earthenware :—

Year.	Weight. 1,000 kilos.	Value. £1,000.
1908	209·3	6·3
1909	139·7	4·2
1910	138·2	4·2

More than one-half of the earthenware is German, while the rest is mostly British or French. The imports of porcelain have averaged about £1,000 annually during the three years. Most of it was German. An importer informed me that there is considerable delay in the delivery of German earthenware—from nine to twelve months from the placing of the order. He also informed me that he considered English packing of these goods better than the German packing. The duty on plain earthenware is 10 centavos per kilo and on other kinds 20 centavos ; that on porcelain for the table is 40 centavos per kilo. Sanitary ware is mostly imported from the United States and the United Kingdom. The duty on this is 20 centavos per kilo.

GLASS.—The average annual value of the imports during the three years has been about £2,200. Belgium and the United States have between them shared the greater part of the trade. Looking-glasses are mostly imported from Germany or Belgium. The duty on looking-glasses is C1.00 per kilo. Bottles are mostly of German manufacture. Those for use in drug stores are stated to be very cheap and arrive in crates well packed with straw. The duties on bottles are 5 or 20 centavos per kilo. The duties on sheet glass range from 10 centavos to 20 centavos per kilo. Table Glassware.—The greater part of this trade was with Germany, while the United States also shared in it. United States glassware is generally of the commoner kind. The finest glassware imported is Austrian or French. The British share in this trade is small. The duties vary from 20 centavos to 40 centavos per kilo.

PANAMA.

GLASSWARE.—The imports have averaged about £4,400 per annum for the period 1908–10. Germany had the largest share, followed by the United States. The imports from Great Britain and other countries were unimportant. The imports of window glass are relatively small, having amounted to about £1,700 in 1909 and £2,300 in 1910. The United States and Belgium supplied the greater part. Plate glass is mostly British. The small trade in empty bottles is mostly with Germany and the United States.

CHINAWARE AND EARTHENWARE.—The imports of earthenware have been as follows :—

Year.	Weight. 1,000 kilos.	Value. £1,000.	United Kingdom. Per cent.	Germany. Per cent.
1908	548·7	3·6	?	?
1909	230·7	5·2	15	61
1910	237·7	5·2	32	58

The remainder was mostly supplied from the United States. The imports of chinaware were :—1908 (weight 1,000 kilos.) 17·1, (value £1,000) 0·6 ; 1909, 34·3, 2·4 ; 1910 94·0, 2·8. China and Japan, along with Germany, have the bulk of the trade, while France has a smaller share. That of the United Kingdom is small in amount.

Porcelain Tableware to the value of £788,400, the weight being 17,888·4 metric tons, was exported from Germany during the first six months of the current year. The figures show a steady increase.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are taken from the August issue of the "Board of Trade Labour Gazette" :—

POTTERY TRADES.—Employment in the pottery trades was fairly good on the whole, and was better than a month ago and a year ago. Returns from firms employing 16,923 workpeople in the week ended July 26 showed an increase of 0·1 per cent. in the number employed, and of 5·9 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 2·5 per cent. in the number employed and of 1·5 in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture ...	2,342	£2,743
Earthenware manufacture	12,120	11,989
Other branches (including unspecified) ...	2,461	2,438
Total	16,923	£17,170

Districts.	Number employed.	Wages paid.
Potteries	12,652	£12,183
Other districts... ...	4,271	4,987
Total	16,923	£17,170

The china section showed some decline on a month ago, but a decided improvement on a year ago. Employment in the earthenware section in the Potteries district was reported fairly good on the whole, showing some improvement both on a month and a year ago. In the other districts it was fair, but showed a slight decline on a month ago. At Swadlincote, however, it was still slack. In Scotland employment was reported as good on the whole.

GLASS TRADES.—Employment continued fairly good on the whole. Returns from firms employing 7,608 workpeople in the week ended July 26 showed a decrease of 1·2 per cent. in the number employed and in the amount of wages paid, as compared with a month ago. Compared with a year ago, there was a decrease of 2·7 per cent. in the number employed and of 1·6 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,597	£7,341
Flint glassware (not bottles) ...	1,828	2,163
Other branches... ...	183	232
Total	7,608	£9,736

Districts.	Number employed.	Wages paid.
North of England ...	824	£1,025
Yorkshire	4,336	5,702
Lancashire	854	1,043
Worcestershire & Warwickshire	718	902
Scotland	570	755
Other parts of United Kingdom	306	309
Total	7,608	£9,736

Employment in the flint glass bottle trade in Yorkshire was good, and better than a year ago ; in the ordinary glass bottle trade it was fair, but not so good as a month ago and a year ago. At Mexborough it was reported as bad. With glass bottle makers at St. Helens employment continued moderate ; at Sunderland a decline was reported ; employment was fair at Glasgow and remained good at Dublin and Bristol. Employment continued fair with sheet glass flatteners, and good with sheet and plate glass workers at St. Helens, and good with flint glass makers and cutters at Birmingham and in the Wordsley and Stourbridge district. With pressed glass makers on the Tyne and Wear it was fair, and better than a month ago and a year ago.

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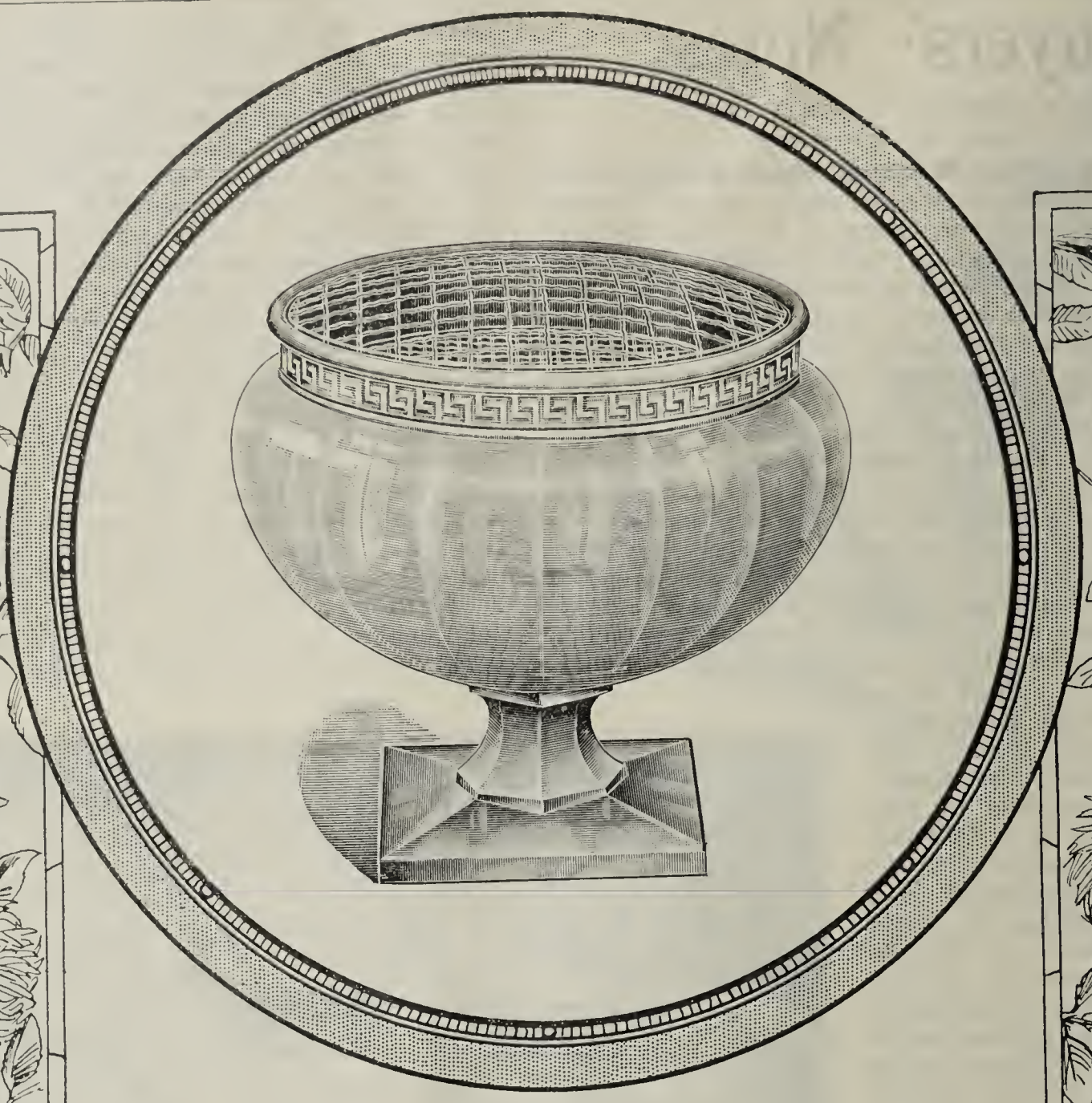
Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

Cauldon, Ltd. (Brown-Westhead, Moore & Co.), Stoke-on-Trent, whose town show-room at St. Andrew's House, 34, Holborn-viaduct, is in charge of Mr. John Leyland, do not really need a prefatory introduction to the general reader of these notes, but it is perhaps only fair to a firm with a heritage such as theirs to give them the benefit of it when such an opportunity as this arises by stating that they are the successors of the original concern founded by Job Ridgway, along with his son John, at the Cauldon-place Works, Stoke-on-Trent, as far back as 140 years ago. The signboard, "Cauldon China," which is apparent to everyone passing either by vehicle or on foot through Holborn-circus, conspicuously indicating the locality of the company's room, seems to suggest that nothing more than that is needed, and certainly one must be considered very unlearned indeed in the realm of ceramics if unaware of the company's wide sphere of operations in the manufacture of everything that is of a superior order in relation to pottery. Their china, however, although undoubtedly the acme of their success, after all only represents one department of their activities, for they are also makers of earthenware and sanitary ware, and as regards the last-mentioned, it is certainly interesting to recall that they claim to be the absolute pioneers of sanitary pottery, inasmuch as this department of their works was founded by the late Mr. William Moore, the father of the present managing director, in association with the late Mr. George Jennings, in the earlier half of the eighteenth century; and to these gentlemen the thanks of all interested in perfect sanitation—and who is not?—must be accorded. However much one may already know of the firm's operations, it is not out of place to call to mind that they exhibited sanitary pottery as long ago as the great exhibition of 1851, which was the first exhibition to the recollection of the writer that was ever honoured with an earthenware sanitary exhibit. I was reminded of this important department of the company's work by a magnificent piece of sanitary ware in Mr. Leyland's room—a lavatory—which serves the double function of ornamentation and ablution. It is decorated with a mazarine blue band and burnished gold lines, and is fitted with Cauldon patent nickel-plated wastes. The firm's sanitary department forms a very important section of their trade; in fact, represents probably a third of their total output, a considerable portion of this being sent to the Continent, and although it is a trifle wide of the range of this Journal, one feels that it is impossible to ignore such an important factor, and must, therefore, pay it due deference before proceeding to refer to matters of more intimate interest to the general pottery dealer for whom these notes are primarily intended. As regards their general china and earthenware, the firm may at once be described as makers for all the markets of the world. More than half of their trade, probably more nearly two-thirds, is concerned with foreign markets and overseas dominions, and the name of "Cauldon" is therefore well known on all the beaten tracks of the world's commerce. I have already hazarded the view that the culmination of their efforts may be said to have been reached in their china. In this they make nothing but of the very highest order, and in doing so they specialise mainly in articles for the table, such as dinnerware, dessertware, teaware, and breakfastware. As regards china particularly, the firm have a time-honoured reputation, and it is not out of place to mention here that they manufactured the china for the Government of India in connection with the King's recent visit, whilst for many years past they have supplied the Indian Government with ware bearing the badge of the late King Edward, and prior to that with ware with the badge of the late Queen Victoria. Moreover, they have recently supplied a large quantity of china for the new Indian Presidency at Delhi. One might recount innumerable instances from personal experience of recognitions paid to the firm's past accomplishments, but the best way to appreciate the charms of their productions is to visit their show rooms. As to the durability of "Cauldon" china, we need do no more than call attention to the illustration, which shows pieces of a tea and breakfast service which has been in continual use in one family for 90 years, and which to-day, in a wonderful state of preservation, can be viewed at the company's works show room. These are the only remaining pieces of the service, the other pieces being destroyed with their valuable exhibits at the Brussels Exhibition. When the writer recently called upon Mr. Leyland, he found amongst some of the very newest things received from the works some really exquisite designs in china toiletware, the elegance of which was as complete as the body is choice. One can conceive of nothing more captivating in effect than some of these designs, and apart from the undeniable excellence of the work of the artists, the ware is of that creamy translucent cast which makes it everywhere admired, and which has probably done more than anything else to give "Cauldon" china the fame which it has deservedly won. The patterns are restricted neither to style nor to shape, but in the latter, as in the former, every factor is essentially of "Cauldon" type. The writer was pleased for once to be able to inspect something here of a distinctly present-day type, and for a brief moment forget all about the "age of reproductions," and gloried in the beauties of modern art. Grounds of different colours relieved with best burnished gold embellishments and flower paintings, were possibly predominant in this range of china toilets,



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CHARMINGLY DECORATED WITH GOLD KEY BORDERS, AND MADE IN A VARIETY OF SHAPES, A SELECTION OF THESE BOWLS SHOULD BE IN EVERY SHOP WHERE CUSTOMERS REQUIREMENTS —ARE FASTIDIOUSLY STUDIED—

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and some of the gold scroll prints were intrinsically lovely. None of the decorations are overlaboured or immoderately pretentious. Perhaps one of the most gorgeous treatments on show, though at the same time thoroughly chaste and unaggressive, was a wide plainly incised acid band, almost an inch wide, round the belly of the ewer and basin, this being supplemented by a gold line slightly apart from the band on either side of it, and a dropping gold trellis and leafage print, with strong gold edge and line and solid gold footline, and strong gilt traced handles to the handled pieces. The ground colours employed are solid and bright; what is more they are variable, and the firm is always pleased to consider suggestions or modifications in these high-class designs such as may commend themselves to an art-loving clientèle, though generally the samples on show are considered the embodiment of perfection. The centre ewer and bowl shown in our illustration is of the "Athens" shape, shape, plain yet graceful, and an eminently suitable form



RECENT "CAULDON" WARE. [*Photo. by "The Pottery Gazette."*

place in the hands of a skilful decorator. Unfortunately the highly reflective tendencies of both the glaze and the burnished gold do not permit us by a simple photographic process to reproduce it as it deserves, but the following description, read in conjunction with our illustration, may serve to convey some idea of its merits. It has a broad band of royal or mazarine blue, ornamented with a choice gold print, and in the band large panels are reserved for beautifully hand-painted floral groups. One is only to inspect such a service to at once experience a desire to become the possessor of it, and this design is only one of many exhibiting a similar power. China tableware is one of the firm's main lines. Here again the range of samples on show is admirable, and a personal inspection will do far more to impress one than an abundantly wordy appreciation. The designs are graded from very neat and simple effects at a price commensurate with good quality to the most highly ornate capable of satisfying the most fastidiously minded. Amongst them must be a feature is the acid incrustation work for which the firm has earned unqualified distinction for a considerable time. The dinner-plate shown to the right of our illustration has a band of colour rim depth which is intercepted by a narrow acid gold border, the incrustation in this case being a very minutely engraved grape design. This plate typifies a departure in the realm of "Cauldon" acids, inasmuch as it is a scalloped plate, and the acid border necessarily follows the contour of the plate, whereas "Cauldon" acids, practically since the initiation of the process, have in the main been applied to simple plain round shapes. There has been a feeling for some time for a scalloped edge plate lending itself to a variegation of the acid treatment, and there is every indication that the move will be a successful one. Another pattern on show at the present time which interested the writer greatly, and which is specially worthy of mention, has two acid gold borders on a ground-laid rim of ivory, the intervening space between the acid borders being occupied with an ornamentation including medallion vases and scrollwork in flat and raised gilding; the centre of the plate is left white, the effect of which is to show up the charming rim decoration to distinct advantage. A further richly acid-worked dinner pattern is done on the Lansdowne shape which has an exceedingly classical coverdish. This has a similar double acid border, but with a rather lighter scroll pattern between the acids of raised and flat gold star ornaments. A distinguished singer, who shall be nameless, recently selected this identical pattern for a fine monogram dinner service, and the writer admires her choice. Proceeding to china dessertware, there are some alluring reproductions on show, of some of the "Cauldon" patterns which were well in evidence over a hundred years ago, and they are as reasonable in price as they are outstanding in merit. The palette of ground colours is extensive, and a fact that appears to be distinctly impressive is that the firm is producing a series of oven china colours, passing through a process thoroughly identical with the well-known mazarine blue, and giving an effect entirely equal to kiln colours. The shades, amongst others, include greys, pale drabs and



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cameo blues. Expressing this in another way, the on-glaze tints of the kiln are obtained, but with the permanency and the brilliancy of the under-glaze work of the oven. This remark, although made under the heading of dessertware, applies equally, of course, to the other sections of the fine china trade, with which the firm is concerned. In china tea and breakfastware two of the newest designs are :— (1) A cameo blue border (underglaze) with festoon of roses and connecting medallions and a painted floral festoon added; this pattern is also produced in hard-kiln pink, as well as a delicate green, in fact, the colours are variable almost as desired ; (2) a Chinese pattern with raised paste effects which can be had either with or without a wide diaper ground of grey, green, red, &c. The inspiration of this pattern is admittedly Oriental, but its adaptation is undoubtedly original. It is done on the Grecian shape tea and saucer, and is capitally effective. The tea and saucer shown in our illustration are of the Imperial shape and have royal blue bands with fine gold borders on the bands, and between them a grey diaper ground, through which break large painted roses admirably executed. Coming now to earthenware, we may summarise by saying that Cauldon Ltd., make everything that is usable. The plate and soverdish we illustrate are of the Rouen pattern, following the spirit and method of the old Rouen which everybody knows so well, in that the whole of the decoration is under the glaze. It is a type of decoration which is clearly reminiscent of the antique, and the buyer on the lookout for something with a dash of antiquity in it, and yet not blatant, has something here to interest him. The pattern is offered with different colour effects, and, unlike the original Rouen, also with the addition of gold. Some other very good earthenware patterns on show have diaper borders in different colours, some rim width, others much wider, with floral patterns surmounting the diaper print. In earthenware toilet ware the most recently modelled shape is the " Kaga," a very useful and at the same time pleasing shaped ewer and basin. Here the firm has something strikingly new. The " Colonial " is another very good old shape which has been lying low for very many years, and which has been revived with good effect. A new " Vermicelli " ground pattern is offered in all the lighter underglaze colours with sprays of Oriental flowers and exotic birds towering over the groundwork, the colour of the latter being extremely powerful. From these more elaborate patterns to the simple plain prints would be a long story, therefore much must be left to the imagination and the experience of the reader.

John Tams, Ltd., Crown Pottery, Longton, whose town rooms at 22, Bartlett's-buildings, Holborn-circus, E.C., are in charge of Mr. Harry Barnett, have recently introduced a striking innovation which bids fair to mark a distinct epoch in their business. Their name has long been familiar to buyers as makers of useful and ornamental earthenware, particularly in vases, flowerpots, toilet ware and suite ware. Their decorations, however, have in the main been of a light, modern, ornate character, and I should imagine that their trade has very largely been built up in this class of production. When I recently called at their works I was therefore intensely interested to see that they have just brought out a line which is as far removed from anything they have previously made as can well be imagined. Realising that there is a genuine feeling at the present time in the higher circles of the trade for a severer type of art, staid and substantial, they have gone to a considerable expense in modelling a whole series of articles suggested by a study of some of the best-known shapes in the various museums which embody the principal attractions of early eighteenth century art. To these shapes, which have a quiet but undoubted beauty of form, they have adapted the old Chinese willow pattern, but dealt with in multi-colour. The treatment is an agreeable relief to the universal single-printed, dark blue willow, and the colours employed are so unaggressive and in such quiet harmony that this new adaptation should prove a really good move, and justify the not inconsiderable expense which the modelling of the various lines has entailed. The earliest pieces which had come through to completion and which I had the pleasure of seeing when I called, included a fine range of tall vases—probably at least a dozen—all newly modelled to suit the design ; rose bowls, plain round and hexagonal ; pierced plaques, trays and dishes ; a pilgrim bottle ; a teapot, sugar and cream ; and a number of novelties in trinketry. The piece we illustrate is a really first-class example of clever potting. It is beautifully modelled, and is so arranged



ADAPTED WILLOW PATTERN : JOHN TAMS, LTD.

that it can be used either as a pot-pourri or as a flower container. The perforations at the top are skilfully carried out, and in every respect the piece is distinctly enticing, and would make a worthy contribution to any drawing room. Art critics will have something here which they will have hard work to find fault with, and there seems to be little doubt that in this particular line, which, I believe, is to be known as the " Nankin," John Tams, Ltd., have struck the right vein, and we congratulate them upon such a capital line and such an interesting departure.

C. T. Maling & Sons, Ford Potteries, Newcastle-on-Tyne, whose metropolitan agent is Mr. S. Stanley, with rooms at 20, Bartlett's-buildings, Holborn-circus, E.C., are important manufacturers of earthenware, and are

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renowned for their "Cetem" ware. They are an old-established firm, occupying commodious works in the North of England which are always busy manufacturing articles in wide variety and in wonderful bulk. One may be pardoned for referring to the extensive scope of their business, and in mentioning first of all the enormous quantities of lines which they are ever steadily turning out in undecorated ware, especially in inexpensive cream-coloured ware. At one time Maling & Sons were principally noted for their huge turnover in jam jars and the profusion of their C. C. lines, but although they have lost none of their prestige in these everyday lines of utility, to-day they are engaged in a very important supplementary trade, the quality of which seems to have improved so remarkably since its introduction that they have made quite a name for themselves with it. I refer to their good-class semi-porcelain, which possesses the qualities of brightness and durability, and which is being evolved in a wonderful way in the direction of improved decoration. One of the principal impressions which assails one in inspecting their show-rooms is the marked progress they have made of recent years in their decorative ware, a good deal of which improvement is possibly due to the suggestions of Mr. Stanley, who has joined them within the last few years. Many new shapes have been modelled and numerous new designs engraved, indicating a noticeable desire on the part of the firm to be competitive in the direction of the better class wares. They are admittedly strong in toiletware, and many of the patterns now showing are of neat, china-looking shapes. The "Granville" is one of these, having a very useful shaped ewer and a flat rim basin of a distinctly pleasing form. The "Chester" is another shape very suitable for receiving light and dainty designs emulative of china, and the "Hylton" is a good old-fashioned shape which enjoys a splendid run. They have a black ground design in toiletware which has a depth and solidity about it which is sure to render it saleable. The firm is also clearly at home with vases, flowerpots, and bulb-bowls, and these are shown in comprehensive variety. There is an admirable range of vases, of forms specially suitable for mounting with electric light fittings or with oil-containers, and as these are so wonderfully adaptable and accommodating, they are naturally finding favour, especially as there is an apparent craze just now for vases so mounted. In the matter of decoration Maling & Sons have entered zealously into under-glaze work, and promise to increase their business in a remarkable way in consequence. In dinner patterns they have some very good designs, principally in the lighter decorative treatments, and amongst these their "Maltese" pattern, available in either blue or green, with or without gold finish, looks extremely inviting. The sales of this pattern, which was introduced some twelve months ago, have never flagged, indeed the demand ever since its initiation has been almost greater than the supply. A new oblong shape has just been modelled, to be known as the "Royal," and in decoration 2428 looks capital. The "Mikado" pattern is another very good line, supplied in three or four different colour prints. This has a rose knob cover-dish known as the "Sefton" shape. There is also a very good line on show of decorated earthenware salad bowls with earthenware servers to match, of variable designs and prices. For blanc-mange moulds, hospital and photographic ware Maling & Sons are admirably laid out, in fact their range of C. C. wares generally is really meritorious, including as it does every phase of household article that can be potted. We illustrate just a few pieces of their decorated ware. These include their No. 8 shape vase with decoration 9629, which is a popular shape for mounting on the lines suggested. When fitted for electric it is supplied with cover, but when used for oil the cover is, of course, unnecessary. In the design under notice it receives a black panelling treatment. The other vase is No. 6 shape with decoration No. 9593, and has an all-over black ground with richly coloured Oriental flowers. The ewer and bowl shown is of the "Granville" shape, and the pieces chosen for illustration have an enamelled stork design which is very attractive. Buyers who have not yet made the acquaintance of Maling & Sons so far as decorated earthenware is concerned have something yet to learn.



C. T. Maling & Sons' Decorated Earthenware. [*Photo. by "The Pottery Gazette."*

Grimwades, Ltd., Winton, Stoke, Elgin, Upper Hanley, and Heron Cross Potteries, are represented in London by Mr. John Sayer, at Winton House, 13, St. Andrew-street, E.C., where a representative assortment of their principal productions can always be seen to marked advantage. Unfortunately, one finds now and again in visiting the show rooms up and down the country that certain really good patterns are sometimes rendered comparatively ineffective by reason of their being indifferently shown. This, however, is certainly not the case in Mr. Sayer's rooms, which have been recently fitted throughout with

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the patent "Grimwade" display stands, the introduction of which has resulted in displacing all fixed shelving, and consequently everything in the rooms is now shown on its own individual stand. One is at once able to inspect any particular design entirely on its merits. There is no fear of attention being diverted inopportunely by something which has no connection whatever with the sample under review. It would be well worth paying a visit to Mr. Sayer's rooms, if for no other purpose than to have the opportunity of witnessing the efficiency of the new fittings. By the adoption of the stands in question the artistic display of all kinds of pottery has been immensely facilitated. Important improvements have been recently introduced at the suggestion of Mr. Sayer in the direction of accessory wires, which have exerted an important bearing upon such considerations as protection and support. Grimwades, Ltd., are well known as extensive manufacturers of all descriptions of general earthenware, as also of china tea and breakfast ware, and, since 1885, have been building up an important and far-reaching connection. Their export department, established in 1890, has now become a strong factor of their business, and this is not surprising, since they have something to offer suitable to the needs of every known market. A saliently strong point with this firm is toiletware, and on the ground floor of their London premises there is to be seen a capital range of toilets in all sorts of treatments, the shapes of which are up-to-date, and the designs bright and effective. Moreover, the prices are extremely moderate. Amongst some of the newest of these should be mentioned the "Jacobean" ware, a coloured autumn vine leaf and fruit design on a black background, suitably finished off with gold. This can be had in all-over, panel or sectional treatments as desired, with or without the addition of relief in delicate ground colours such as Wedgwood blue. The "Hampton Chintz" is another exceptionally good design, which is probably as realistic in its chintz effect as anything on the market; and as this can be supplied in a variety of shapes and with many modifications in the matter of colouring and treatment, its scope is practically unlimited. These designs meet a very present need for ware suitable to early types of furnishings, and it would not be consistent with the traditions of Grimwades, Ltd., if they did not put something on the market for which there is an expressed demand. In their "Seville" ware they offer a design which is bold but artistic, an orange fruit and leaf on a band of colour of a shade different to the self-coloured ground. Though this particular pattern is definitely outstanding, being forceful in character, it is not outrageous, and it has met with an undoubted popularity. The "Copenhagen" pattern is a delicate pink chrysanthemum on a lilac-shaded ground, and in its general effect is dainty and pleasing. The "Ribbon Chintz" is done on a shape specially modelled for it, with an embossment to represent a tied ribbon and bow, this being dealt with in different colours to suit individual tastes, and having a self-coloured cretonne background of a different shade to the ribbon. One of the very newest pieces which the writer has had the pleasure of inspecting just as it came from the kiln is to be known as the "Soie" pattern. It is done on the "Agra" shape, and, as its name implies, the design represents a silk. What is more, the effect achieved is that of a shot silk of a delicate combination of Wedgwood blue and maize, the handles being finished off with olive green. The ornamental possibilities of such a design are many, and there is, therefore, every likelihood of numerous other adaptations shortly making their appearance. The surface of the ewer as it comes from the mould is honeycombed all over, and the finished effect is thoroughly commendable, and suggests something quite novel. Our



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illustration endeavours to show the first piece from the kiln, but as, of course, the main beauty of a decoration of this type is in the skilful blending of the tints, and we are unable to produce these by photography, the foregoing illustration must be relied on in the absence of the sample itself to convey an impression as to its claims. The other toilets shown are of the "Chelsea" shape, which is very graceful, and with Dresden sprays of wonderfully bright colouring looks excellent, and a very pretty fluted service in what is known as the Bow style, which follows the lines of the Lowestoft, old decoration being included in alternate panels. There is an unquestionable call for this type of treatment, which promises to supersede the demand for some of the heavier styles. In dinner ware the firm has much to offer, this also being a very strong department with them. One of the choicest of the new designs is the "Flaxman," which has a simple border in a delicate blue. The other three designs shown in our illustration are the "Fresco," supplied with or without gold edge or gilt handles; E. 1304 pattern, which has a neat coloured border; and the Old Blue Willow, which can be had either plain printed, or with gilt finishing line and solid gold handles. The cover-dishes shown are of the "King" and "Rex" shapes, the former being round and the latter oval. The "Queen Mary Chintz" is a new design of marked daintiness, of which a tea set was selected by Her Majesty in April last. "It is just like a chintz," the Queen remarked. Certainly nothing could be prettier for the table, or for dressing a window. It has a light blue diaper background with yellow and pink roses and delicate green leafage. This design can be had right through in suite ware for the tea, breakfast, or supper table. It promises to be an exceptionally good seller. The egg frames, triple trays, oval fruit dishes, cheese dishes, and other accessory articles treated in this design look simply sweet. There is also an extensive display of china tea and breakfast patterns in Mr. Sayer's rooms at the present time. The simpler patterns appear to predominate, suggesting that the demand just now lies in that direction. It would not do to complete an article of this sort without referring to the hygienic kitchen and pantry ware for which Grimwades, Ltd., have earned a wide popularity. Introduced in 1908 this range of goods has satisfied a growing need, and a few pieces selected out of many for enumeration are the flyless milk bowl with incurved top, preventing the fly from contaminating the milk, the hygienic jug, the bevel edge drainer, the pie dish with annular channel and air vents, the oval household jar, the "Perfection" pie funnel, and the now universal and almost indispensable quick cooker. The whole of these pieces and others are protected by Royal letters patent, and have been certified by the British Institute of Hygiene. Finally, the firm endeavours at all times to give orders a quick despatch, and some of their recent achievements in this direction have been quite remarkable.

F. Winkle & Co., Ltd., Colonial Pottery, Stoke-on-Trent, are reputed for their progressiveness as earthenware manufacturers, and own capacious and well-equipped works for turning out pottery in extensive quantities. Wherever one may wander within the cycle of the potting trade he is bound to be brought up against the famous "Whieldon" ware, and the writer has several times recently found it prominently displayed for sale in the china chops of some extremely out-of-the-way districts. As to the firm's export trade, this is undeniable. Their London rooms are at 13, Charterhouse-street, where Mr. John Porter, an agent of a quarter of a century's standing, watches their interests. He has a capital showroom, both as regards space and light, and it contains a prolific array of samples from which to choose. In toilet ware and dinner ware especially there is a commanding exhibition just now, and not only as regards quantity but quality also. The body of the "Whieldon" ware is an extremely sound one of a distinctly white cast, and upon it the decorations, which in the main are dainty, neat and modest, look extremely fine. There is invariably a freshness of aspect about Mr. Porter's rooms, and this is to be accounted for by the fact that anything which after a fair trial is unsuccessful is judiciously withdrawn, and is replaced by something which fills a want. One of the main things to notice is without doubt the enormous strides which have been made by Winkle & Co. in the direction of satisfying the needs of the West End trade, and this they have done so thoroughly that they have now secured a firm foothold in most houses of repute, and may be said to be well established in a high-class market. There is no doubt that they have laid themselves out very successfully to improve not only the extent of their business, but also its quality. As usual one of the first considerations for the autumn has been an augmentation of their lines in dinner ware, and an entirely new shape known as the "New Round" has a cover-dish which will at once appeal to all who see it as being a pretty, common sense shape, considered from every point of view. A nice plain print in Imperial blue has been chosen to it, which is to be known as the "Dartmouth." This is absolutely new, and before it has had a chance to be marketed we predict that it will be an



NEW DESIGNS BY F. WINKLE & CO., LTD. [*Photo. by "The Pottery Gazette."*

extremely good seller. It is illustrated to the right of the photograph here reproduced, but, as will be seen, the print is so extremely delicate in its tone that it is difficult to show it successfully in conjunction with decorations which are more powerful in character. However, it can be taken as definite that it is a really capital line. There are many other neat and simple patterns in dinner ware, as well as decorations on the shape mentioned, treated in the firm's own style of the popular phase of Chinese treatment, the colours being bright and permanent. There are also many replicas of good class antiques, amongst which should be specially mentioned a decoration following the lines of the old Lowestoft, but originally executed withal. The range of dinner ware, considered as a whole, is very formidable. There is one solid range of dinner patterns on show, an inspection of which suggests a weight of thought and attention on the part of the firm's designers for some time past. Many of these designs at the time of the writer's call early in August had not been exhibited, having only just been received by Mr. Porter from the works. Dessert ware with Winkle & Co. has become a real departure. There are some thoroughly animating lines, one of the most remarkable series amongst them receiving a wide ground-laid band of colour, with gold finishing lines, and a large brightly executed Sèvres floral spray in the centre, the effect being definitely reminiscent of a china treatment. A range of colours may be had for the bands, such as Victoria green, celeste, rose du Barri, canary, ivory, &c. The prices for this style of decoration are quite remarkable. No one can complain of being unable to handle choice dessert ware after having inspected this series, and taken a note of the price. There is also a very good show of suite ware, and in this department a replica of a Sèvres pattern has been reproduced to perfection. Another favourite in suite ware is the "Rose Festoon" with a gold dontelle edge. Oriental styles are also noticeably present in the room, but although these designs are evolved from Eastern art they are originally administrated. In toilet ware the firm is as strong as ever. The newest shape is the "Whieldon," and it is shown in our illustration with decoration 8,419, Rouen style. It will be noticed that this ewer has a very graceful and slender waist, and its form grows on one the longer the eye rests upon it. This is dealt with in a variety of ways, but in the Rouen treatment especially, as illustrated, there is an admirable proposition. There are several toilet decorations in the old Bristol styles which are particularly good, and many other smart adornments. Level with the eye in the showroom is a strong range of vases, amongst which a pink Lowestoft decoration is specially apparent. Her Majesty the Queen was much impressed by this design when recently inspecting the firm's exhibit, and ordered a number of pieces of it, since which it has had a particularly good run. The whole set of vases, and there are many, are pure in shape and period, and we should say constitute a feature to be reckoned with in the trade. The black ground ware of Winkle & Co. has a wonderful gloss, and decorated with Oriental flowers and birds looks very fine.



[*Photo. by "The Pottery Gazette."*

MR. JOHN PORTER'S GOUDA ART WARE.

Mr. John Porter, 13, Charterhouse-street, London, E.C., whose genial personality is so well known amongst English pottery buyers that it is almost unnecessary to mention the situation of his rooms, represents the Plateelbakkerij Art Pottery, Gouda, Holland, and has the sole disposition of their wares for the United Kingdom. During the time Mr. Porter has held this agency, he has done much to familiarise the unique wares manufactured by this firm, which are now far better known by British houses than ever they were before. It would almost seem as if the British market hitherto only needed exploiting in order to secure popularity for the novel forms and decorations emanating from this factory at Gouda. Certainly of late their wares have sold in quarters where they might have been least expected to do so, and are now recognised as a real asset in the stocks of some of the highest class pottery galleries of the metropolis and provinces, whilst in some form or another the manufactures of the firm are capable of meeting the needs of every pottery dealer. To say that the designs are unique, would really be insufficiently expressive; they are drastic. At the same time, they have a peculiar charm about them, probably the result of their marvellously harmonic colour combinations, which cannot fail to be recognised as distinctly appealing. That the sales have of late notably increased comes as no surprise to the writer. Now, one would expect to find that in ornamental wares such as these, where the colours are so complex and so lavishly applied, the body employed would be somewhat soft and porous, but it is not so. As a matter of fact, it is remarkably hard and thoroughly substantial, and this fact may in a great measure account for the popularity of the Gouda firm's manufactures. Whatever the cause, it cannot be gainsaid that they have met with an admitted success, which has resulted in the usual series of emulations by competitors. The British public have approved of this class of art production, and there is no question that it has come to stay. Amongst some of the newest lines on view in Mr. Porter's rooms is a range known as "Summer," a bird decoration, capable of numerous strikingly effective colour manipulations. The "New Marken" series is another triumph in the blending of colours, and it is treated in the richest

of Persian styles. It is bold, vigorous, almost daring, but at the same time artistic to a degree. Another very interesting new decoration is the "Lanac." This is just as bold as its associates, though quite as pleasing and artistic. The "Rondo" is, perhaps, the very newest decoration received by Mr. Porter, and at the time of the writer's call this was absolutely unseen by buyers, as it had not been out of the straw many minutes. There are many other new adaptations of the characteristic Gouda style; numerous new shapes are being continually evolved, many of them combining art with utility, and the prices—well, they range from a few coppers to as many pounds. There are some wonderfully large pieces on show, and on the other hand there are innumerable small articles which should make a strong claim upon the buyer who finds it possible to handle a souvenir trade. There is an attractive line on show of lanterns for accommodating electric light, candles or night lights, and these are being found to be thoroughly saleable, especially as they are so comprehensively graded in the matter of style and price. Electric lamps can be had with painted silk shades to match the pillars, and the catering for the wholesale lamp world is a peculiarly interesting departure. We reproduce three pieces which are descriptive of the general style of many. The unique centre vase is made in a gradient of sizes; the vase to the right illustrates the "Summer" decoration already referred to; and the spill is one of a series of many flower holders of combined usefulness and ornament. Enough has probably been said to remind dealers that the general colour scheming of the Dutch house represented by Mr. Porter is distinctly appealing, and with the revival of Tudor style houses, the wares in question should find increasing favour. The showroom at this season of the year, when dealers are preparing for the fall trade, is well worth a special visit.

every chance of being fittingly displayed. New designs arrive so frequently, and in such quantities, that more room was urgently needed, and although when the writer called the changes were not finally completed, the room offered a very presentable appearance, and the removal has been effected so capably that by the time these notes appear in print there will not be much left to be done to make the new showroom the finest that David Nestle, Ltd., have ever had. One principal section of the new room constitutes a feature in the Villeroy & Boch productions, this being the self-coloured art ware in a variety of beautiful soft colours, some of which, in spite of attempts to copy slavishly in certain quarters, have not yet been successfully emulated, inasmuch as their smoothness and delicacy remind one of the addition of a flux to a glaze, the glossiness of the latter being in no way restricted, and its lustrousness in no sense impaired. The original art shade produced, it may be remembered, was Rose du Barri, and the success of this was so paramount that other tender shades have since been evolved, such as peacock blue, canary yellow, turquoise, lilac or lavender, violet, &c. These shades are, in the main, applied to graceful



[*Photo. by "The Pottery Gazette."*

VILLEROY & BOCH: SLIP PAINTINGS.

Villeroy & Boch, whose interests in the United Kingdom are watched by David Nestle, Ltd., Hatton-garden, London, E.C., are to be mentioned amongst the most extensive pottery manufacturers of the world. Not only are they identified with the manufacture of earthenware but also of glassware, and in the production of their commodities they employ seven large earthenware factories besides one for glass. In the former they produce all sorts of earthenware, majolica, stoneware, terra cotta, tiles, mosaics, and faïence, and in the latter crystal and demi-crystal table glass, plain and coloured, useful and ornamental. One of the first things to mention in noticing their productions just now is that D. Nestle, Ltd., have recently removed from one side of Hatton-garden to the other, from No. 7 to No. 100, and the change is one which should be of a great advantage. The new room on the ground floor is commodious, airy and light, and there is no doubt whatever that the numerous samples which have always been available at the company's London rooms will have here art shapes in vases, of which there is an exceedingly wide range. A new line on show is in the form of a marbled decoration, two of the predominant arrangements of this type of decoration being respectively of a pervading blue and green. The marbled effect is admirable, and here, again, the glaze retains all its lustre and resplendence. The Mettlach stoneware, which has previously been mentioned in these notes, is shown in a variety of new manipulations, amongst which there are many attractive specialities, and from this factory earthenware, ironstone, artistic stoneware, and Delft continue to arrive in pleasing selections. A new line is offered in covered honeys or preserves with notched cover for spoon—another effort to avoid the wasp in the jam. The "Hein" decoration in the Mettlach ware has a rose du Barri ground with conventionally painted circular panels, offering a bright and agreeable relief to the self-colour of the ware. A number of high-class tall-shaped vases have recently been received from the Dresden factory in a range of different colourings, and all of them are well worthy of a careful inspection.

There are many large pieces of distinctive artistic merit, the forms being classical and the decorations carefully and worthily chosen. In glassware the Wadgassen factory's productions are well shown, and there is quite a good assortment of table articles, principally hocks and liqueurs, in plain and simple etched designs. The "Frankfurt" suite is a very good line in plain optic glass simply etched. We illustrate three pieces of earthenware from the Dresden factory. This manufactory at the present time is making a speciality of fine paintings, landscapes, &c., on earthenware, and the three pieces chosen by us for illustration show slip paintings of undoubted worth. The centre piece is a coloured water lily, beautifully executed, whilst the other two pieces represent respectively skilfully painted subjects in roses and violas. For an extensive variety of conspicuously saleable lines the writer heartily recommends a visit to the new rooms of David Nestle, Ltd., at 100, Hatton-garden, which is closely adjacent to Holborn-circus, and therefore in every way convenient.

Mr. Paul Bocquillon, Paris, who is represented in London by Mr. Rene P. Luce, at 69, Hatton-garden, E.C., specialises in reproductions of antique china and earthenware, and has some wonderfully faithful copies on show of some of the old masterpieces of Lowestoft, Chelsea, Sèvres, Delft Rouen, Chantilly, &c., as well as numerous imitations of Chinese art, many of which are reproduced with such minuteness of detail and realism as to make it difficult even for a connoisseur to decide which is the original and which the copy. The artists employed by Mr. Bocquillon are adepts at their business, and leave no stone unturned in their operations in order to give their productions such a finish as shall make them almost impossible of detection as mere copies. After an inspection of Mr. Luce's room, even the writer would be inclined to hesitate before buying an antique, for fear of being offered a modern reproduction of a much appraised original, and one is impressed with the fear that possibly many pieces cherished by collectors as genuine relics of past decades may, after all, be merely copystruck. I should imagine that Mr. Bocquillon demurs at copying nothing in the region of the antique, and it is fortunate at least that he is satisfied with reproducing pieces the manufacture of which is now recognised as defunct, otherwise I fear we should be living in very anxious times, the copies all being so perfectly produced. The bowls we illustrate are a new line (in antiques ?), being produced in three different sizes, and the illustration shows one in an original Chelsea decoration, and the other two in original Lowestoft. Mr. Rene Luce has recently issued a new catalogue, and will be pleased to send copies post free to our readers on application.



[*Photo. by "The Pottery Gazette."*

ANTIQUE REPRODUCTIONS BY MR. PAUL BOCQUILLON.

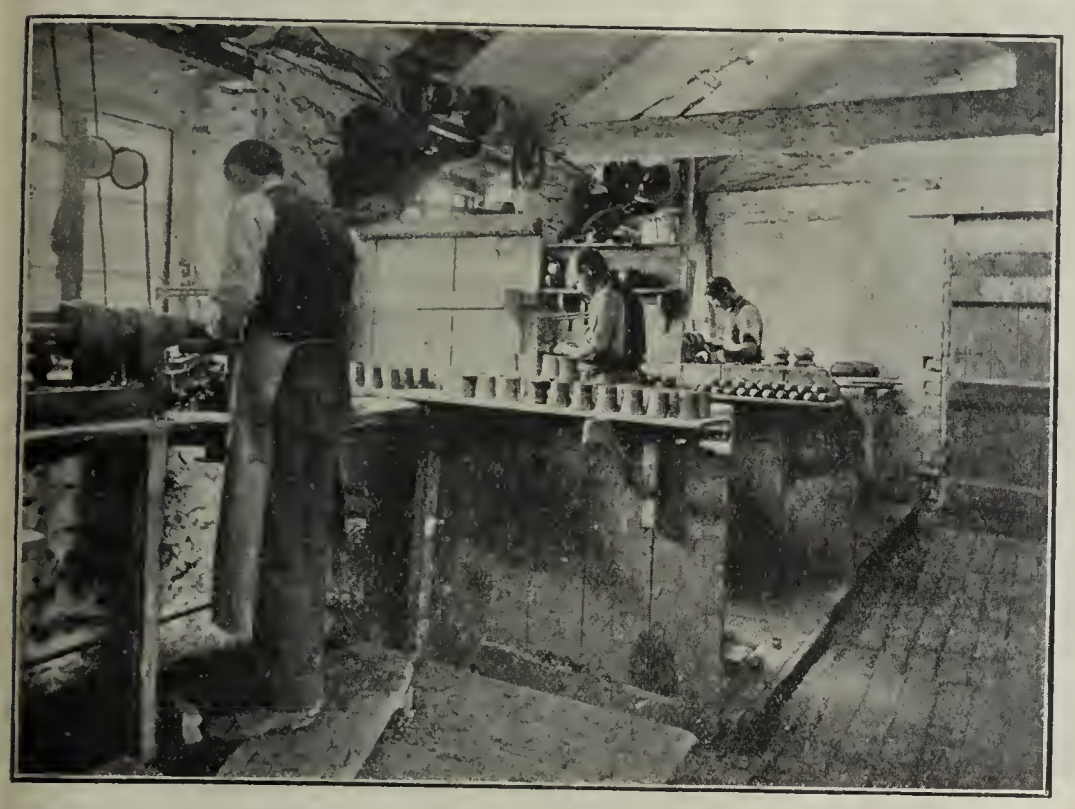
Opaque White Enamels.—(Specially translated from "La Céramique.")—Hitherto it has been chiefly the practice to employ oxides of tin or titanium, and the oxides and silicates of zirconium, aluminium, &c., for rendering enamels and glass opaque. Landau, Kreidl, and Heller, however, have ascertained that a far more powerful effect can be produced by using the metallic compounds in the hydrated condition. At the same time it has been found that a particular state of hydration is necessary to secure this result, because the hydrates abstract from the ingredients of the enamel a quantity of alkali which varies with the quantity of water of hydration present; and this amount of alkali may attain such proportions as to prevent the product from becoming opaque at all. This view seems to be confirmed by the fact that the normal alkali zirconates, that is to say, those in which the whole of the hydrogen in the normal hydrate is replaced by alkali, are quite incapable of producing opacity. Consequently, the hydrated metallic compounds used must be unable to take up more than small quantities of alkali—for example, those from which the water of hydration has been partially expelled. The hydrated oxide of zirconium may be prepared from zirconates obtained by the complete disaggregation of zirconium oxide by alkalis, the alkali of the zirconates being more or less eliminated by the aid of water, weak acids, or salts. If the alkali has been completely removed, the residual hydrate must be heated to a temperature sufficient to drive off part of the combined water of hydration, this treatment diminishing the power of the product to absorb alkali. Hydrated silicates of zirconium may be prepared in a similar manner. The tin hydrates can be made from alkali stannates by displacing the alkali more or less completely with acids, and drying as above so as to expel more or less of the water of hydration. In the case of all the agents which produce opacity, and especially tin and zirconium, it is found that the covering power increases considerably as the percentage of alkali diminishes, up to a certain point, beyond which it decreases again. It may, therefore, be concluded that the maximum covering power is furnished by a hydrated alkali compound of definite composition. In the case of hydrated silicate of zirconium, the best results are obtained with an alkali content of between 2 and 7 per cent., preferably 3 per cent. or 4 per cent. In the case of the other compounds in question, the most suitable composition in respect of alkali content can be easily ascertained by a few trials.

SOME SOUTH DEVON POTTERIES.

(By a "Pottery Gazette" Special Commissioner.)

(*Continued from page* 914.)

THE Royal Aller Vale and Watcombe Pottery Co. (Proprietors, Hexter, Humpherson & Co.) have two factories, the Royal Aller Vale Pottery, situate between Torquay and Newton Abbot, and the Royal Watcombe Pottery, Watcombe-road, St. Mary Church, Torquay. The proprietors, who, long before embarking upon the manufacture of decorative pottery, had acquired real



Royal Aller Vale Pottery Co.: Turning Shop.

distinction in the manufacture of bricks, tiles, and stoneware pipes at Newton Abbot, in their enterprise evidently foresaw the unrestricted possibilities of employing the vein of red clay existing in the proximity of Torbay for the manufacture of artistic and ornamental articles, and the success which has attended their efforts is abundant testimony to the wisdom of the development they made in this direction. The Watcombe Pottery is situated about two miles from Torquay, close to the Watcombe rocks and the Maidencombe beach, and as I was unable to visit both their factories this is the one on which I decided to call. A tramcar brought me to within easy walking distance of the place, and again I found myself in happy surroundings.

There is little need, perhaps, to remind the readers of this journal of the scope and the merits of this company's productions, amongst which I think still predominates the quaint and characteristic motto ware for which Devonshire has long been famous. The proprietors of the two potteries in question are always pleased to show visitors round their works, and no one spending a holiday in the vicinity should fail to take advantage of this offer, for the visit cannot fail to prove well worth the time. The methods of manufacture are none the less entertaining by reason of their primitiveness. Indeed, I am inclined to think they are all the more interesting on that account, and, amongst these, the ease and dexterity with which the thrower manipulates his balls of clay at once absorbs the attention and impresses the minds of all who inspect the process. The allied process of turning is next inspected, and subsequently the handling, both of which have a special interest for those who are not accustomed to see this sort of thing from day to day. As for myself, I think the most interesting department of such pottery is, without doubt, the decorating room, which seems to be endowed with an air of freedom and unconventionality, thus forming quite a relief from the decorating shops of the large factories engaged in the serious competition incidental to the manufacture of bread and butter lines. The freehand method of manipulating the brush adopted by the artists is quite a characteristic, and this is particularly noticeable in the painting of the terra-cotta surfaces with the specially prepared coloured clays, especially in the Devonshire view pieces, which play such an important part in the souvenir trade, not only of the south-western counties, but in many resorts much further afield. As to the kilns, these appear to have much in common with those of many other potteries, as the illustration on the next page will show. The Watcombe pottery may be said to rival in its productions those of its sister concern, the Royal Aller Vale, and both have been honoured with royal patronage, and the orders of many distinguished noblemen, some of whom have been pleased from time to time to furnish the company with useful suggestions, whilst medals and certificates have been gained at many of the principal exhibitions. Not only is the Watcombe factory entailed in the manufacture of readily saleable souvenirs, but also in the production of vases of classical forms with embellishments not merely the result of the brush, but of the mould. It produces some very effectively modelled statuettes and groups, and the pair known as "You dirty boy," manufactured for A. & F. Pears, Ltd., of soap fame, is an illustration of the resources of their modellers. Furthermore, articles are manufactured here of distinct utility.

I should very much have liked to visit also the Royal Aller Vale Works, which have earned quite a reputation. Some of the self-coloured art wares of the allied concern are of a distinctly pleasing tone, and amongst them the



Royal Aller Vale Pottery Co.: Decorating Room.

blues and greens are a pronounced feature. The company's judiciously designated "Polychrome" ware is a most effective combination of colours, and in the departments of grotesques there is much to entertain and amuse. Larger articles, such as pedestals and pots, are not out of the limits, and some quite large pieces are manufactured, whilst in the realm of larger vases, which appears to be a department in which the company is especially interested just now, an excellent choice is offered, both in shape and decoration, some of the pieces being extremely graceful in contour and elegant in design.



ROYAL ALLER VALE POTTERY CO.: THE KILNS.

The company's wares are sent out to all parts of England and the Continent, and also to America and the Colonies, which certainly constitutes a testimony to the ability of the Devonshire craftsmen.

It is peculiarly fitting that, as I write, information comes to hand of an important success which the firm has achieved at the Ghent Exhibition, having been awarded a diploma and gold medal for their art pottery. As this is possibly the happiest finale to a notice of this description, I leave the Aller Vale and Watcombe Potteries here to refer to others engaged in the manufacture of somewhat similar lines.

THE ROYAL LONGPARK POTTERY CO., Torquay, whose premises are not far removed from Torre Station, well repaid the next visit I made. Walking out to the pottery in question, the only indication I had that I had arrived at my destination was a signboard and a case of Royal Longpark Pottery at the end of a carriage drive some hundred yards or so in length, avenued by fir trees, along which one would have hesitated to proceed but for the signboard inviting one to do so. Amongst the first impressions I formed on arriving at the far end of the avenue was the peculiar construction of the stone building facing me, and again I wondered as to whether I had taken the wrong turning. Inquiries made of the only person in sight elicited the information that a very interesting story attaches to the construction of the building, which is attributed to the eminent engineer Brunel, the erector of the Saltash bridge. I learned that the building is one of several of a similar kind which were constructed with the idea of propelling trains by compressed air, a venture which evidently proved unsuccessful. But it is an ill wind which blows nobody good. Here were some most substantially built premises which had fallen into disuse, and which were eminently suitable to the founding of a small pottery. Little persuasion was necessary to induce the owners to lease them on very favourable terms to anyone desirous of occupying them, and the result is a pottery undertaking formed under favourable auspices with little initial expense, with abounding clay facilities, and not only so, but having a situation right on the side of the Great Western Railway Company's line in an uncommonly pleasant rural locality, not two miles from the sea, and with apple trees—which were in full blossom at the time of my visit—not more than half a dozen yards from the main stack and kilns. I could not help making a mental comparison with some of the smoke-begrimed districts with which I am more familiar.

I found the manager, Mr. R. H. Skinner, an exceedingly courteous gentleman, and he was kind enough to permit me to wander right round the buildings. Another word is perhaps justified in regard to the buildings. One of the principal features in connection therewith is the square tower stack, which is beautifully constructed of solid masonry. The base of it is over 7 ft. in thickness, and around it the ivy clings in profusion. Naturally this stack was turned to good account in establishing a pottery, and is used to create the draught for the whole of the kilns, of which there are four.

A word also as to the clay. The red clay, from which the majority of the Royal Longpark pottery is made, is raised on their own premises, right by the side of the pottery, but the company is also concerned with the making of white ware, and the clay for this is obtained from the Newton Abbot fields, closely adjacent, and the carriage on which is, therefore, negligible.

Lack of space will not permit me to detail the different methods employed in the manufacture of the pottery produced here. In any case, these are of the usual type, but I nevertheless inspected the whole of them, including the sliphouse on the ground floor; the throwing and turning shop upstairs (the wheels, I noticed, in two cases out of three were driven by machinery); the drying room, also upstairs, heated by the exhaust steam from the boiler, which is directed into this particular building on escaping from the boiler, and which, therefore, also costs nothing; and the decorating shops and warehouses. The glost warehouses, of which there are three, are well fixtured, and a new principal glost warehouse has very recently been added, and fills an urgent need. The trade is a growing one, as may be gathered by the statement that whereas the concern was started with only about seven operatives, there are now nearer 50.

I lingered to watch the slip decorators at work, some of their methods being distinctly engaging. The different coloured slips are applied to the red body in such a way as to give it an entirely different appearance. The employees, it should be noted, are all males, and, moreover, Devonshire men, all of them.

I was particularly struck with some of the company's productions, and took a few notes concerning them. Some of the designs were very creditable. The Devonshire motto ware is freely manufactured, and probably represents the principal commodity produced, but there are many designs which illustrate a marked change of treatment, and the effects of which in many cases are quite favourable to the eye. The Devonshire "Sunset" ware is a line which seems to enjoy a particularly good run, and the blending of the colours is achieved in such a way as to secure a most effective result at a moderate

price. A new slip decoration having a dark royal blue top border and a border of celeste blue below, with a slip ornamentation on the blue, has justified its introduction in a quite remarkable way, and so far the orders have exceeded the production. The green glaze ware with naturally painted daffodil, with which everyone surely is now familiar, is shown in the whole suite of the company's productions, and is a class of decoration which is peculiarly suited to the body, the white, green and yellow slips employed in the design standing out on the red body of the ware in marked relief. Their olive green ware in tea sets, teapots, hot water jugs, &c., is another excellent line. A shamrock decoration for Ireland, and a thistle decoration for Scotland, have played an important part in the present year's productions. A new bright blue glaze, relieved with white slip medallions, is another line deserving of special mention. The "Dragon" ware, with a blue background, goes exceedingly well, and is made in vases from 4 in. to 20 in. in height. They have a pedestal and pot, the latter of which is 10 in. in diameter, and the combined pot and pedestal 40 in. high, so that the larger articles are by no means beyond their resources. The new "Delhi" ware has a blue ground with a relief in white enamel.

Finishing up with the showroom, I spent some time in inspecting the many novel articles and decorations which it contained, and I regret I am unable to go into further detail respecting them. I can safely say, however, that the half-day which I allotted to the Royal Longpark Pottery Co. was well repaid, and I have little doubt that the next time I have occasion to visit it I shall find it in the same place, but considerably augmented.

HART & MOIST, Royal Devon Pottery, St. Thomas, Exeter, was the last of the South Devon potteries which I visited in the course of my return journey. This company employs some 40 hands in the manufacture of wares similar to those produced by the two factories previously described, and if I do not refer to this particular pottery at length it is simply because to do so would be to repeat much that I have already said. Their ware is made from a red clay very similar to that of the other factories, and this is obtained in the neighbourhood of Exeter. Ever since the foundation of the pottery some thirty years ago, the firm have been unceasingly employed in the same class of business as they originally elected to follow, and have consequently had ample opportunities to acquire the secrets of production and apply them commercially. The whole of their hands are Devonshire trained, most of them on their own factory. I found them extremely busy preparing for their important summer trade, which of course always sees them inundated with orders, though it is remarkable that they keep going at a fairly steady pace the whole of the year round. They offer some exceedingly attractive lines, and are not satisfied to keep on working at old stock designs. They have realised that if they are to keep busy they must be continually on the look-out for something novel, and that they cater for the public in this respect hardly needs saying. As soon as any particular design begins to waver, a new one is there to take its place, and this is most likely the secret of the firm's constant activity. I was interested to learn that Mr. Moist, one of the partners, was originally trained at the Bovey Tracey factory, to which I have already alluded at some length, and subsequently at potteries in Bristol and Burslem. His colleague, Mr. Hart, has also had a long association with the trade. Although the competition in the class of wares produced by Hart & Moist is keener to-day than it has ever been, it is significant that they are turning out more ware to-day than at any period in their history, which suggests at once that the designs have met with a growing popularity. What, perhaps, interested me most of all was to learn that the ware is exported to Canada in considerable quantities, as well as to Africa and other British Colonies. As a matter of fact during the past year the firm has exported a larger bulk of their ware to Canada than ever before, and in proof of the extent to which trade is conducted with that colony I was shown original indents, which came quite as a revelation to me. The company has a traveller continually out in England, in addition to running several agencies in specified districts. Although I understand the sales of the original Devonshire motto ware have fallen off somewhat of recent years, this has been more than counterbalanced, as I have already striven to show, by new treatments in ornamentals. One of the newest of these, and a popular one, is the X L design, which is an overlaid green glaze decoration on the red body. The well-known ship ware, which has for a long time been produced by Hart & Moist in large quantities, still goes freely. I was not able to stay at this particular factory as long as I should have liked, as my allotted time for the tour had expired, but I had a rapid glance round the warehouses, which was sufficient to satisfy me that quite a good trade is done by them, and that they produce lines which are well worthy of the recommendation I can give them.

It is possible that there may be other potteries in South Devonshire with which I am not familiar, and consequently at which I did not call, but so far as I know I visited the most important ones, and I trust that my account of those I visited will at least serve one purpose, if it does nothing else, that being to show what I set out to prove, that the art of potting, with varying degrees of success, and in some cases with a marked measure of success, is pursued in outlying districts where one might least expect to encounter it.

French Potters' Wages.—The average daily wages of workpeople in the potteries of the Calais district during the year 1912 are quoted as follows in a recent British Consular report:—Foremen, 3s. 9d.; adult workmen, 3s. 4d.; youths, 15 to 21 years, 2s. 6d.; labourers and carters, 2s. 11d. The number of working days in the year is 300.

U.S. Glass Imports and Exports.—During the twelve months ending with June 30, 1913, 378,914 boxes of window glass were imported into the United States, the value being $977,211. The imports during the previous year were 413,478 boxes, valued at $950,123. The imports of polished plate glass during the twelve months ending with June 30, 1913, were 1,279,002 square feet, costing $321,605. The imports during the year ending June 30, 1912, were 1,422,282 square feet, valued at $344,819. The record for other branches of the glass industry is indicated in the following table:—

Articles.	1912.	1913.
Bottles, &c., plain	$913,688	$843,397
Bottles, &c., ornamented	1,001,542	1,032,948
Optical instruments, dutiable ..	597,650	695,135
Optical instruments, free	383,234	504,594
All other	2,037,569	2,162,403
Total	$6,210,625	$6,537,293

The exports during the twelve months ending June 30, 1913, and 1912, were respectively as follows:—

Articles.	1912.	1913.
Bottles, &c.	—	$808,327
Common window glass	$114,109	434,361
Plate glass	50,754	58,830
All other	3,329,290	2,892,124
Total	$3,494,153	$4,193,642

MEDICINAL JARS IN ITALY.

(SPECIALLY CONTRIBUTED.)

TIME passes, customs change, and modern pharmacy jars made of white faïence or glass have a most uninteresting appearance. In Italy, here and there, in some old-fashioned "Spezieria" (drug-shop) a few jars of the ancient type can be seen, but they are probably all imitations, for the real old specimens are exceedingly rare, and have been snapped up by private collectors, or have been bequeathed to museums and national art collections. The "Spezieria" of to-day is merely a grocery shop, entirely different from the apothecary shop of yore, a typical feature of which were the medicinal jars.



[*Photo. by Argus, Milan.*

FIG. 1.

The earliest vases in which drugs and syrups were kept were made in a cylindrical form with graceful concave sides, known under the name of "albarello." As their shape denotes, they are of Eastern origin, their name coming from the Persian "el barain," which means a vase for drugs.

In the fifteenth century in Italy the Speziali (apothecaries) not only made up medicines according to the physician's prescriptions, but they also had a perfectly equipped laboratory where the physics were prepared by their assistants and apprentices in large bronze mortars, where the various drugs were pounded previous to being made up in infusions, decoctions, ointments, &c., according to the standard recipes of the time, and then stored in the medicinal jars and sold by the master who served at the counter. The nature of some of the drugs is amazing, and can in no way be compared to that of our lotions, pills, or tabloids.

Medicinal jars in olden times contained substances so varied as to defy description, such as the oil of scorpions, the milk of giraffes, elephant's liver, viper's flesh, oil of toads, and others more extraordinary and loathsome still which were prescribed by the physicians of the seventeenth century and stored in the beautiful jars, the inscriptions testifying to their contents. Amongst the medicinal jars a great many bear the arms of well-known hospitals



[*Photo. by Argus, Milan.*

FIG. 2.

painted upon them; these were kept specially for supplying drugs to those particular hospitals. There is a panel of "The Physician" on the Campanile del Duomo of Florence which is attributed to Giotto and Andrea Pisano, in which a variety of shapes of medicinal ware are shown, such as bottles, boccali, vases, and jars. Some of the finest specimens of medicinal jars belong to the collection of Castello Sforzesco; Fig. 1 shows some of them. As the inscription denotes, they contained cicorea, cassia, &c. It is most difficult to divide ancient jars in classes; they contained, besides medicaments, colours, spices, perfumes, &c. Piccolpassi, who first wrote about them, dealt with them all together as "Albarelli da Spezierc e da Confezione," meaning vases for drugs and confections. This accounts for the variety of their shapes and the extraordinary lettering and hand painting, of which we have nothing similar in our day.

From an early period, in Faenza, pharmacy bottles and jars were decorated in a style known as "a quartiere," being divided into compartments, painted in bright colours,

and having a medallion with a profile head or subject on one side under which the name of the drug, in Gothic lettering, is inscribed on a ribbon. Vases, bottles, and jars containing scent adorned the shelves of perfumery shops, and others were made for private use to hold cosmetics, preserves, sweetmeats, &c., and these at times had amatory inscriptions with armorial bearings such as: "Dia riam amo" (on a jar at the South Kensington Museum), "Caramen (te) per amore" (on a jar at the British Museum), and these were supposed to be given as wedding gifts or love tokens by the "innamorati" (lovers) to their ladies.

Fig. 2 shows a collection of ancient artistic ceramic vases and jars still containing the ancient medicaments; they belong to the celebrated pharmacy of the Franciscan Friars, in Ragusa (Dalmatia), which is one of the three most ancient ones in existence. The photos give a good idea of the variety of these jars, some with, others without covers, spouts, and handles; they took the form of ewers, vases, cisterns, jars, bottles, amphoras, &c., and some were ornamental vases after classical designs. In the Urbino period the forms were most fanciful, the handles were often serpent-like, the ornamentation exuberant, as was the taste of the time. On the fifteenth century large ovoid-shaped jars the decorations chiefly consisted in bold scrolls, inscriptions, floral wreaths, and figures, but late in the sixteenth century subject painting covered the whole surface, and arabesques and conventional flower patterns in the Persian and Moorish style. The favourite colours used in painting medicinal jars were blue, green, orange, and manganese; but blue predominated. The beauty of the work depended on the skill of the potter, who in those days was a born artist.

CEMENTS AND ADHESIVES FOR GLASS, POTTERY, ETC.

(SPECIALLY TRANSLATED.)

THE following preparations, according to the "Sprechsaal Kalender," serve to repair or secure glass, porcelain, stoneware, &c., and also to fasten such articles to metal fittings. In most cases the articles should be warmed.

(1) Pale rosin 8 parts, white wax 2, colcothar 4, Venice turpentine 1 part, melted together.

(2) Shellac and powdered pumice stone in equal parts, mixed together by the aid of heat.

(3) A thick solution of 1 part of glue in water is mixed with 2 parts of boiled linseed oil.

(4) A concentrated solution of shellac in alcohol.

(5) Mastic 15 parts, shellac 10, turpentine 5 parts, carefully melted, and thinned down with oil of turpentine.

(6) Yellow wax 2 parts, black pitch 1, rosin 4 parts, melted together and mixed with 1 part of fine brickdust.

(7) Litharge 100 parts, mixed with 50 parts of white lead and stirred up to a paste with a mixture of 3 parts of boiled linseed oil and 1 part of copal varnish.

(8) A mixture of glue and gypsum.

(9) Litharge made into a paste with glycerine.

(10) Alabaster gypsum 4 parts, mixed to a thick pulp with 1 part of powdered gum arabic, and a cold-saturated solution of borax.

(11) Gypsum 45 parts, shellac solution 50, thick size 5 parts, mixed to a stiff pulp as quickly as possible and used at once.

(12) One part of finely powdered glass is mixed with 3 parts of calcined tin oxide. For use the mixture is stirred up to a pulp with 1 part of borax (dissolved in a little water) and a concentrated solution of zinc chloride (sp. gr. 1·5 to 1·6).

(13) Water glass and finely sifted cement.

(14) Water glass and a mixture of equal parts of chalk and zinc dust.

(15) Fluorspar 1 part, powdered glass 1, and water glass 1 part, mixed to a thick pulp.

(16) Powdered asbestos 30 parts, barium sulphate 10, fine sand 15 parts, mixed with 45 parts of water glass.

(17) Water glass 1 part, calcined magnesia 1, zinc oxide 1 part. After the cement has been applied the articles should be slowly dried and then heated.

(18) Equal parts of lithopone and powdered quartz (or cement) are intimately mixed and stirred to a thick pulp with water glass. This cement should be freshly prepared.

(19) Casein 1 part, water glass 6 parts.

(20) Casein 4 parts, lime slaked to powder 1 part, stirred up with a little water.

(21) Four parts of isinglass are softened in water during 12 hours and then pressed to get rid of as much surplus water as possible, and heated in a basin on the water bath, being at the same time intimately mixed with a solution of 2 parts of mastic and 1 part of gum ammoniacum in 16 parts of 95 per cent. alcohol. The preparation is stored in tightly closed receptacles, which are placed in warm water before use to liquify the contents.

(22) Best glue 500 parts soaked for six hours in a mixture of 100 parts of acetic acid and 400 parts of water, after which it is dissolved by gentle heat, 1 part of crystallised carbolic acid being added. Twenty parts of ammonium bichromate, dissolved in a minimum of water, are stirred in, and the preparation is stored in dark brown bottles. The cemented articles should be exposed to direct sunlight to cause the cement to harden.

(23) Glue is dissolved in an equal quantity of water, and treated with so much nitric acid that the liquid does not thicken on cooling.

(24) A mixture of alcohol, vinegar, and gelatine, in equal parts, is boiled to the consistence of a thick pulp. For use it should be gently warmed.

(25) A marine glue is prepared by digesting 1 part of caoutchouc with 3 parts of tar oil for several days. After decantation 3 parts of shellac are dissolved in the liquid, which is then poured into moulds to set.

(26) Caoutchouc 75 parts, dissolved in 60 parts of chloroform, 15 parts of mastic being then added.

(27) Sugar 4 parts, dissolved in 12 parts of water, 1 part of freshly-slaked lime being added, and the whole maintained at 170 deg. Fahr. for about half an hour. The mass is left to stand for several days, with occasional stirring, and when the greater part of the lime has disappeared, the supernatant liquid is poured off from the sediment. The resulting gummy substance is crushed and mixed with 3 to 4 parts of best glue, and is rendered homogeneous by heating on the water bath.

(28) Zinc oxide 50 parts, lead sulphate 50 parts, triturated with 36 parts of linseed oil, and mixed with 100 parts of fine manganese dioxide and 100 parts of colcothar, the mixture being then pounded in a cast iron mortar for 12 hours. The cemented articles must be strongly warmed during 24 hours.

The Finnish Glass Industry.—Besides supplying the wants of the country, the glass factories in Finland are also producing the material for export to Russia. In the year under review the weight of unpolished window glass sent to that country equalled 3,363,043 kilos., and the weight of bottles exported to Russia amounted to 990,202 kilos. These figures, in both cases, show an enormous increase over those for 1911 and previous years. Several unions or rings exist in this trade, and glass factories are found at no fewer than 14 places in Finland. The factories produce crystal, household, lamp, and apothecaries' glasses, &c.

Empire Note.

E. Rich & Co., Ltd., Brisbane and Sydney, have recently occupied a newly erected huge four-storey warehouse in Wharf and Adelaide-streets, Brisbane, and from a series of photographs which have reached us, and descriptive information accompanying them, we are able to form a very vivid impression of the magnificence of the whole structure. The photographs remind one very forcibly of the premier stores of the United States. A feature of the new store at once appears to be its solidity, and evidently no expense has been spared to make everything of a thorough and lasting character. The front wall at the base is 4 ft. in thickness, and such a strength is absolutely necessary to carry the heavy weights imposed by the upper floors. The boldness of the main entrance is quite remarkable, though entirely in accord with the character of the whole structure. The vestibule is of "Ironite," with polished granite tiles, the steps leading up to the principal showroom being also of the same material. The basement comprises a huge dock for the loading and unloading of goods, and provision is made for the ingress and egress of vehicles and the facilitation of despatch in defiance of the elements, the whole being under cover. The main showroom on the ground floor is considered to be one of the largest of its kind in the State of Queensland. It is fitted with magnificent glass showcases and tables constructed of silky oak, which combine with the other high-class fittings to make possible a most effective display. On this floor electro-plated wares of all kinds and china and glassware are to be inspected, and the stock of the latter is claimed to be as representative as any to be found in the cities of the Commonwealth. From the commonest kitchen ware to the most costly production the stock is multitudinous, and at prices which are capable of accommodating every weight of pocket. The way in which the goods are shown is distinctly complimentary, as the photograph here reproduced will show. The offices and counting-house are spacious, and elegantly executed in polished silky oak, with art glass panels, whilst the desks and internal fittings are also of this same handsome Queensland timber, which lends a charm to the whole surroundings. Access to the upper floors is attained by two electric goods lifts and a passenger lift, the latter working at 225 ft. per minute. An emergency staircase, constructed of silky oak, can be resorted to in the event of a failure of the electric current. It would be impossible to describe here in detail the large and varied assortment of lines handled on these upper floors, but we may at least say that the third floor is occupied entirely by china and glass in bulk and open stock, the latter being stacked in commodious bins ready for the packer to handle. Ascending to the roof by staircase or elevator, the visitor is impressed by a magnificent view of the city and its surroundings, and a lawn tennis court is here provided, to which the staff resort in fine weather during periods of relaxation. We have been extremely interested by the photographs which have reached us, and in reading about the new warehouse, which we should very much like to have the opportunity of reviewing from personal inspection.



E. Rich & Co.'s China and Glass Showroom.

A FEW CHINA SHOPS IN SOUTH DEVON.

(By a "Pottery Gazette" Special Commissioner.)

(*Concluded from page* 911.)

EXETER.

THE "ever faithful" cathedral city of Exeter boasts of several important china shops, but it is not my business just now to refer to them all, as the ground was covered within comparatively recent years by a predecessor of mine. I broke my journey at this interesting city merely in order to notice one particular shop, which, for certain reasons, was not noticed on the last visit. No one who has found it necessary to visit Exeter can have failed to be impressed by the fact that several of its china shops are of quite a superior order, and amongst them, calling for more than ordinary attention, is the establishment of Jeboult & Son, 198, High-street. This firm has for many years held a high reputation as china and glass merchants, and it is significant that the business was established as far back as the year 1790, having thus been in evidence for the past 123 years. It was originally founded by a Miss Wakley, and though I am not in a position to chronicle seriatim all the main events in its history since its foundation, I can at least say that the concern was purchased by the late Mr. Jeboult, the father of the present proprietor, in the year 1853. Mr. Arthur Henry Jeboult, since the death of his father in 1894, has succeeded to the business, and it is now entirely under his control. The premises are situated in the busiest part of the High-street, almost opposite the General Post Office, and present an imposing aspect. The exterior of the shop is more than ordinarily attractive, indeed of quite a classical order.

Our illustration of it will show that it has a marbled front, and that the plate-glass windows are of such a character that one unfortunately does not see every day in connection with a china shop. Not only is the upper framework of the windows of a somewhat unique type for a provincial shop, but the lettering of the sign indicating the name of the firm is also out of the ordinary, the letters being of the "Alliance" type and made of aluminium. An excellent sun-blind completes a thoroughly attractive exterior. One of the windows at the time of my visit was choicely arranged with the finest English cut glass wares—in fact it was devoted entirely to that purpose, and I must say that it was a truly magnificent showing. The other window contained an equally choice assortment of the highest classes of English china, principally Crown Derby, Coalport, and Worcester. That the whole of the window display did great credit to the proprietor must at once be acceded, for it was tempting in the extreme, and was calculated to absorb the attention and interest of the passer-by. As for the interior of the shop, the furnishings and fittings were capital, and one was apt to forget that it was a china shop that was under review, and to look upon the whole display more in the light of a museum or china gallery. Certainly one might have imagined himself in the West End of London rather than in a distant city in the West of England, and it occurred to me whilst inspecting the premises that there are numberless provincial dealers who might learn some good lessons in



Jeboult & Son, Exeter.

displaying their wares by spending half an hour in Jeboult & Son's establishment. There appeared to be a place for everything, and everything appeared to be in its place. I should certainly be correct in affirming that there is not a single hook in the shop, and although this necessarily means that less ware is displayed, what it is found possible to display is shown under far happier conditions, and the final result is doubtless quite satisfactory, whilst the danger of accident, both personal and financial, is reduced to a minimum. In more ordinary types of businesses such a procedure might, of course, be impracticable, but for a high-class business such as the one under notice the policy seems to be an admirable one. It is almost unnecessary to add that Jeboult & Son act as agents for all the leading manufacturers, and it is perhaps only fair also to say that I could not see a piece of foreign ware in the shop, with the exception of a line which has never been thoroughly exploited by English manufacturers, viz., fireproof china.

finds there quite a number of businesses concerned with our particular trades, but I must say that for its size the china shops, as such, are not altogether what one would expect to find. It would be unwise to attempt to suggest that there is not quite a volume of business transacted in the town, but it is done in directions which did not altogether give me that satisfaction which I might have hoped for in a town of such proportions. I was, in fact, forcibly reminded of my recent visit to Bristol, which seemed to come practically in the same category. One might spend days in Plymouth tracing out the various nooks and corners devoted to the transaction of the china and glass business, and since the town was last noticed in the interests of our editorial columns quite a round half-dozen of the businesses which were at that time thought worthy of review have become defunct, amongst these being included the important business of T. Jarvis & Son, 68, George-street.



INTERIOR OF JEBOULT & SON'S, EXETER.

Our second illustration shows the interior to advantage, and may perhaps convey a better impression of the prevailing conditions than a mere play on words could possibly do. The arrangement of the stock is distinctly meritorious. Observe the centre table displayed with rich cut glass wares; the dust-proof show-cases on the left; and the general orderliness of the whole of the interior. I shall refrain from saying more, for to add anything would only be to duplicate what I have already said, and to create the impression in another way that the shop ranks amongst the most up-to-date concerns west of London.

PLYMOUTH.

Passing on to Plymouth, that important city of the west with which is linked many historic associations, one

On the other hand, a new china shop has sprung into existence this very year, that being the establishment of

LAWLEYS', LTD., 48, George-street. I doubt not that there is room for this business, and it promises fair to have a good time ahead.

The new shop, which was opened on May 13 under the charge of Mr. S. B. Henderson, forms one of a number of branches of Lawleys', Ltd., in different parts of the country, and it is fitted out in a high-class manner on similar lines to their other shops. Seeing, however, that my visit was paid during May, the display of the stock was not quite complete, though it was already beginning to assume a ship-shape appearance, and the two principal windows contained a commendable assortment of really good-class wares, both in china and glass. To enumerate all the makers would be a lengthy business. One section of each of these main windows is reserved for

displaying patterns always kept in stock. This policy has been found very successful in the past, and is, therefore, likely to be continued at the Plymouth branch. Another section of the window was to my mind capitally effective, constituting an ideal display of nothing but kitchen wares. It included Royal Worcester vitreous ware, Grimwade hygienic articles and Denby stone ware. The whole of the window space was utilised in an attractive way, and judging by the number of people congregated outside I should imagine that a good deal of local interest is being evinced in the new undertaking. I was much impressed with this sectionising policy in the window dressing, which seemed to have the effect of concentrating attention on particular classes of goods in a remarkable way. Now and again one sees a window where toilet ware, dinner ware, tea ware, and a host of miscellaneous articles, even to miniatures and grotesques, are jumbled up together in such a way that it is almost impossible for one's attention to be riveted to anything in particular, and no sooner is attention attracted to an individual line than it is immediately diverted to something else which has no connection with it. This is certainly not the case in Lawleys' window. Entering the shop I was again particularly pleased with the fixturing. There was an arrangement under which it was possible to shelve the toilet sets and still show each set individually in a sort of pen, just sufficiently large to admit the reception of the single or double toilet set, and nothing more. At a glance it was possible for the eye to pass over some thirty or forty sets, each of which was shown quite independently and yet complete. Such a course appeared to me to be infinitely preferable to directing a customer's attention, when desirous of effecting a sale for toilet ware, to a number of ewers and basins pushed away under a bench. The china dealer cannot hope to sell toilet ware in any quantity unless he gives his prospective customers the best facilities for seeing it, especially as in the furnishing establishment one can see the complete toilet set as it is eventually to appear in the bedroom. The arrangement I noticed adopted in the shop now under notice appeared to be an ingenious attempt to get over an acknowledged difficulty.



LAWLEYS' NEW SHOP AT PLYMOUTH.



[*Photo. by "The Pottery Gazette."*

A CUT GLASS CORNER : LAWLEYS', LTD., PLYMOUTH.

The general stock of the new shop was, I should say, a representative assortment of almost everything saleable in china, earthenware and glass. There were many features on which one might enlarge, but I think the corner which interested me most of all was the one devoted to a display of the cut glass wares. Plate glass shelves were employed backed by mirrors, and the result was an almost kaleidoscopic effect. It impressed me so much that I attempted to take a photograph of it, and though the reproduction hardly does justice to the original, I am presuming to show it. The inside of the shop is altogether prim and orderly, and the whole appearance is much brightened and improved by reason of the floor

being laid with a linoleum of a rich red ground having a neat mosaic pattern. I certainly felt on leaving the shop that the venture is justified, and I was pleased to think that Plymouth is evidently not to suffer the loss of one of its few high-class bona-fide china shops through the recent retirement of T. Jarvis & Sons.

Spooner & Co., Ltd., drapers, Plymouth, have a very nice china and glass department in the basement of their huge emporium, which is very much on the lines of some of the departmental stores of London. The showroom is large, brilliantly lighted by electricity, and the stock extensive and well assorted. They deal with the principal makers, and have a number of sole agencies. The department has been running for quite a number of years, and when Mr. Jarvis retired, this company, I understand, bought up the whole of the stock which remained on hand unsold, and they have already disposed of practically the whole of it. The "Crescent" patterns were very conspicuous, and upon making an observation to that effect I learned that Spooner & Co., Ltd., are the sole agents for this firm, having taken over the agency on Mr. Jarvis's retirement. The "Spode Italian" pattern of Copeland & Sons, as well as some of their underglaze chintz designs, also appeared to be well shown, and I understood that the former was reserved to Spooner & Co., Ltd., for Plymouth. There was a big range of Doulton's Shakespeare and Dickens characters, as well as their Old Meissen pattern, and quite a huge show of majolica flowerpots, pots and pedestals, &c., of various makes. There was also one very useful stand of white china articles, and numerous articles and services suitable for presentation purposes. Mr. W. H. Lane has charge of the china, glass and hardware departments, and showed me round the place; in fact, by his courtesy I was enabled to see right through the whole store, comprising in addition to the china, glass and hardware departments, fancy drapery, millinery, mantles, dresses and silks, tailoring, gentlemen's outfitting, furnishing trimmings, carpets and rugs, bedsteads and cabinets. By resorting to the lift I finished up with the café on the top storey, adjoining which is the roof garden, with its smoking and coffee lounges, from which it is possible on a clear day to get an excellent bird's-eye view of the town. The business is a thoroughly important one in Plymouth.

Pophams, Plymouth, is another very extensive business which has thought well to take under its wing a china and glass department, and this is controlled by Mr. A. D. Simpson, who has been with the firm for 42 years, and who, although nearly seventy years of age, is still in harness, and justifies his presence in the establishment quite as well as, if not better than, many a younger man might. I was not at all dissatisfied with the department. The stock was quite a representative one, and although domestic earthenware could be had of varying makes and qualities right down to the very leanest prices, I can safely say that they do not deal in seconds. There was a fine window full of English glass, and the range of dinner sets inside the department contributed to by some of the very best makers was quite a worthy one. There was plain white ware of Maddocks, the latest shapes and patterns of Cauldon, Mintons, Booths and similar houses, tea and breakfast ware in good variety and of widely different makes, and toilet ware to suit all tastes. As to the show-cases—which were in themselves works of art, and I learned had been made in the firm's own cabinet department—they contained a magnificent collection of valuable ornamentals and services, amongst which stood out pre-eminently a large Royal Worcester vase with richly-painted panels by Baldwin—an excellent piece of workmanship—and many choice lines of Coalport, Crown Derby, and other well-known makes. Mr. Simpson, after showing me some of the choice pieces contained in his particular department, found it necessary to conduct me through the cabinet department in order to show me how the stock of the china department was distributed over the entire store, and how hundreds of toilet sets were shown to better advantage on the different bedroom stands, and vases and ornamentals on the different pieces of drawing room furniture. A feature of the furnishing department was the completely furnished house at a comprehensive price, and I was favoured in being conducted right through the respective rooms of one of these model houses, which, of course, itself contained quite a proportion of china and earthenware. Popham's certainly deserve a word of congratulation, even from a sectional trade paper such as this, on the character and extent of their business, which I must admit was quite a revelation to me.

Mr. T. R. Pointon, Frankfurt-square, Plymouth, has a large warehouse where he deals with a volume of china and earthenware largely in a wholesale manner, though I believe he also does some retail. I was told that the business has been in existence between sixty and seventy years, having been established originally by Mr. Pointon's father. The present proprietor has himself been connected with it for some fifty years. It is quite a comprehensive business, and undertakes corporation, government and shipping contracts. Mr. Pointon has also a good connection amongst the licensed victuallers, and in this connection imports Bohemian and other foreign flint glass in large quantities. He specialises in English tea sets, but handles also a measure of foreign ware in certain lines which he considers are unapproachable for effect in English goods at anything like a competitive price. Mr. Pointon was very busy when I called, with a Potteries traveller, as a matter of fact, consequently I did not crave much of his time, but I walked over the different floors of the warehouse, and satisfied myself that he does a really extensive business, not only in Plymouth but in the neighbouring counties.

C. Leigh, 25, Frankfurt-street, Plymouth, has a wholesale and retail china and earthenware business, which I concluded deals principally with the cheaper classes of goods. His window included dinner ware, tea and breakfast ware, toilet ware, jugs, and miscellaneous lines of a readily saleable character. Mr. W. Trevan, Cecil-street, Plymouth, has a small business, which appears to be concerned only with cheap ornamentals. Mr. S. Smith, 110, Union-street, Stonehouse, Plymouth, has a medium class business here, which has been removed from No. 129. The shop appeared to be well stocked, mostly, however, with the cheaper lines. Notwithstanding, he turns over, I should conclude, a fair share of business.

Batten & Co., 60 and 61, Union-street, Plymouth, have quite a nice double-fronted shop, which is well stocked. Mr. Batten was inaccessible when I called, but the business struck me as being one which is capable of handling a volume of trade, but mostly of a cheaper character. The selection, however, was not devoid of some of the better class makes, amongst which I noticed in the window Doulton and Wedgwood. "Crown Art" ware, "Royal Devon," "Noritare" hand-painted Japanese china, "Sutherland" art china, Langley flowerpots, Lovatts' (Langley Mill) leadless glaze domestic ware, and "Paragon Queen Alexandra Rose" were amongst some of the lines I noticed on show. I believe the business is largely of a wholesale character.

The Army and Navy Co-operative Society, Ltd., 173, Union-street, Plymouth, and Fox, Roy & Co., Bank-chambers, Plymouth, have china departments of some considerable importance on the lines of the usual departmental stores. It will thus be seen that the stores generally play a very important part in the china and glass business transacted in Plymouth.

DEVONPORT.

Mr. H. G. Cole, 100, Fore-street, Devonport, owns a medium-class business, which is really a continuation of a venture originally embarked upon by his grandfather in Treville-street, Plymouth, somewhere about 1840. Mr. Cole's father turned his attention to Devonport about 1860, and took over the business of a Mr. Burt in Fore-street. From these premises he removed to St. Aubyn-street, eventually taking over the premises at 100, Fore-street in 1887. Since then the business has proceeded uninterruptedly. The shop contains a very fair selection of goods, principally of a bright and attractive appearance at a moderate price, and within the reach of all, a class of goods calculated to sell readily in the neighbourhood. A speciality is made of china tea-sets, though the stock contains, I should say, something of everything. A large stock of loose glass ware was visible, particularly in wines, tumblers, decanters, fruit dishes, comports, salads, &c. There were some good examples of Staffordshire dinnerware, and Winkle's "Whieldon" ware with shaded ground and coloured birds and blossoms, was one of the numerous good patterns on show. Mr. Cole, the present proprietor, has been identified with the trade all his life, and should therefore understand the business thoroughly, and the needs of the locality, which include the requirements of the various regimental and naval messes. There is also a considerable amount of hiring china and glass, &c.

H. J. & E. A. Boolds, Ltd., Market-street, Devonport, are complete house furnishers, and have a china department which has been established about eight years, and occupies two shops. It contains everything that is needed for the household from the cheapest to the best. Of the stock the tea ware and dinner ware are perhaps the strongest points, and of these they have a very good range. Since the shop was noticed by us last time they have added another window to the department. They had some very attractive patterns on show at the time I paid them a call, amongst which the "Devon" toilet ware of S. Fielding & Co., Ltd., and John Aynsley & Co.'s "Lowestoft" tea ware reproductions were specially noticeable. The department generally seems to be going strong, and the extensions seem to suggest that the establishment of this china and glass department filled a need.

In conclusion, I would point out that there are, of course, certain other china shops of some importance in South Devon—I do not presume to have dealt with them all; for instance, in the town of Dartmouth there are at least two shops, those of Mr. E. Haveloek, Newcomin-road, and J. Lovell & Sons, the Quay; there is also a china business of some account at Exmouth in the establishment of Bennetts & Co., and at Totnes Mr. R. Knott has a shop, of which I have from time to time heard favourably. All of these, with possibly others, may come in for notice on some future occasion.

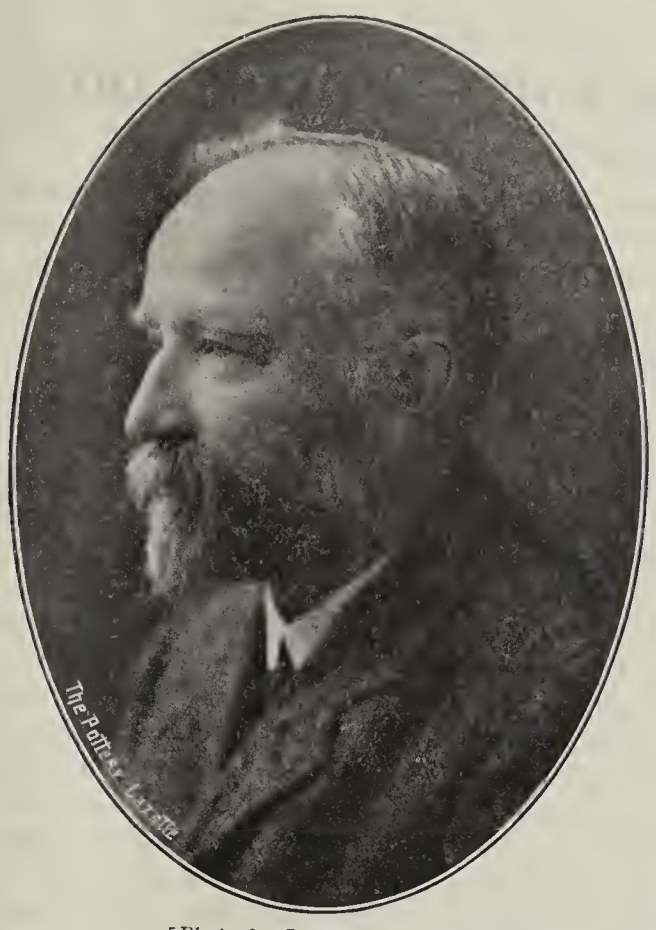
Pottery and Porcelain to the value of £149,786 were imported into Saigon in 1910, £132,831 in 1911, and £93,501 in 1912. Of the last-named total £40,487 was from Hong Kong, £33,414 from Japan, and £15,205 from France.



A CORNISH CHINA CLAY EXPERT.

(FROM OUR OWN CORNISH CORRESPONDENT.)

THERE are many of our readers who are brought directly and indirectly into touch with china clay, but their knowledge is limited to the fact that it is a useful manufacturing material. If one seeks for a scientific knowledge on china clay or china stone, it will be found that the possessors of such knowledge are very few in number. The little lump of white, friable substance that might perchance fall from one of the heavily laden wagons as it is conveyed to the station or seaport, is carelessly trampled into the mud, but in the hands of an expert, such as Mr. J. M. Coon, of St. Austell, it becomes an article as interesting and fascinating as gold. Mr. Coon's writings and lectures on china clay and china stone have been voluminous. His association with china clay extends over a period of 35 years, and his miniature laboratory for the complete analysis of this product enables him to fulfil the large share of investigation which he has to do. The subject of our sketch is the eldest son of the late Mr. Alexander Coon, of St. Austell; he first saw the light on Oct. 11, 1855. He was first educated at a dame school, where several gentlemen now occupying responsible positions were also associated at that time. Subsequently Mr. Coon became scholar at Dr. Drake's school at Ledral House, and he afterwards became the first scholar at Weston House School, under the direction of the late Rev. R. Sampson. Mr. Coon declares that he still continues his education, and spends two or three hours a day in scientific work. After assisting his father for several years in his large tailoring business, Mr. Coon became associated with the late Mr. T. Kinsman (auctioneer and surveyor), whose only daughter he subsequently married.



[*Photo. by J. H. Coath & Son, St. Austell.*

Mr. J. M. Coon.

Later on, Mr. Coon's tastes seemed to have developed towards engineering and scientific pursuits, and he became connected with the late Mr. J. E. Veale, J.P., in the first St. Austell Electric Light Works. Soon Mr. Coon directed his earnest attention to the study of the nature and origin of china clay and stone, and his first lecture of importance was given to the Devon and Cornwall Natural History Society, at the Plymouth Institution, quite twenty years ago. Since then he has given lectures to the Mineralogical Society, at the Royal Geological Society's Rooms in London, before the English Ceramic Society at Hanley, and also at the Camborne School of Mines. At the invitation of Dr. Mellor, Mr. Coon has, for two years

past, been investigating china stone, its geological occurrences, petrological characteristics, and microscopical structure. His collection of photographs of the various phases of this interesting subject is probably unique, comprising the primitive method of the air-drying process, when each lump of clay had to be scraped clean before its transmission to the markets of the world. Much of Mr. Coon's time is occupied by important positions which he holds under the Commissioners of Taxes and the St. Austell Market Authority. He is endowed with a student's temperament, preferring to work in seclusion, and accounts himself sufficiently rewarded if his scientific studies and investigations contribute something to the world's knowledge and advancement.

COBALT IN POTTERY DECORATION.

(SPECIALLY TRANSLATED.)

EITHER as a pigment or as an adjunct to some process or other, cobalt is one of the most widely used metals in ceramics, and for decorative purposes occupies the front rank. The metal itself is prepared from the ores by repeated calcinations, in order to eliminate admixtures, and is then dissolved in hydrochloric acid, the solutions being purified by treatment with sulphuretted hydrogen. K. Falk, in "Die Glasindustrie," states that commercial cobalt is often contaminated with arsenic, sulphur and nickel, all of which must be got rid of before it can be used, if pure shades of colour are to be obtained.

Cobaltous phosphate is the compound most frequently employed in the decoration of pottery, either in its pure state or after being treated with zinc sulphate, the resulting preparation forming the best cobalt pigment known, as regards beauty of colour. Cobaltous silicate is also an important salt, excellently adapted for colouring enamels. A trial should, however, be made first, because the composition of the enamel has an influence on the colour shade. The nitrate, chloride, and sulphate have also their own special uses, particularly in underglaze decoration.

Cobalt is predominant in glost kiln decoration, and attains its highest value in cobalt ware, which has become highly popular on account of its peculiarly handsome appearance. In making this ware, a pure white body is essential, any yellowish or other tinge spoiling the effect. There are two methods of application. In the one the cobalt is applied to the baked ware previous to glazing; in the other to the glazed ware, but this method is restricted to toning glaze colours, and the extra baking increases the cost. Cobaltous phosphate is the pigment used, a very good dark colour being obtained from cobaltous phosphate 183 parts and alumina 103 parts, whilst a light shade is given by cobaltous phosphate 34 parts, alumina 50, zinc oxide 20 parts. If the zinc-cobalt preparation be employed, the composition is approximately pigment 50, alumina 50 parts. The addition of pure cobaltous oxide is advisable in this case. The preparation can also be made from black cobaltous oxide, 83 parts of the oxide, and 103 of alumina being a suitable proportion, though, of course, a number of shades can be obtained by altering the percentages of the ingredients.

Cobalt solutions are valuable additions to underglaze colours, cobalt nitrate being the best for this purpose, since the chloride is liable to become spotty. The sulphate is also used, the choice depending chiefly on the desired shade of colour and on the subject. Great care is naturally required in the preparation of the solutions, the tendency of certain colours to run being always attributable to the mixing—in the case of cobalt, to an undue proportion of flux. In the case of glost kiln colours a distinction must be drawn between the additions which are made for the purpose of diluting the pigment, and those intended to lower the melting point of the mixture, and the former should not be of such a character as to produce the latter effect. The zinc oxide used in making the cobalt preparation, however, merely improves the vitrification of the alumina and cobalt preparation, the small quantity used having no effect on the melting point.

For aerograph decoration, cobalt is treated in just the same way as any other pigment, being carefully ground and sifted. In coloured glazes cobalt also plays an important part. The cobalt blues are largely diluted with comparatively fusible adjuncts, chiefly zinc oxide, lead oxide, and borax. For dark blues, 6 parts of these adjuncts are taken to 1 of pigment, whilst for lighter shades the proportions may be increased to 10 : 1.

Cobalt is also largely used in the glass industry, either for superficial application or for staining the glass all through. Owing to its powerful staining properties, the proportions required are much smaller than for decorating pottery, 1 part in 10 being sufficient to produce a deep blue coloration, whilst pale blue can be obtained with 1 part in 14, when applied superficially.

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.

"FORCELIN." 346,071. Tiles and bricks made of porcelain or earthenware. Class 16. Naamlooze Vennootschap "Dolomeut," 225-227, Korte Leidschedwarsstraat, Amsterdam, Holland. Address for service in the United Kingdom is c/o S. Sokal, 14-15, Southampton-bldgs., W.C.

SUPERLUX. 352,664. Glass shades. Class 15. The General Electric Co., Ltd., 67, Queen Victoria-st., E.C.

CHLORATMOS. 353,050. All goods included in Class 15. J. Trotter, 40, Gordon-st., Glasgow.

TUFCO. 353,004. Incandescent glass globes, glass chimneys, and glass shades. Class 15. The Union Incandescent Fittings Co., Ltd., 103, Union-street, Oldham.

RUNIC. 352,063. And **VULCAN.** 352,065. Sanitary earthenware. Class 16. Also **SUMMIT.** 352,820. **VICTOR.** 352,821. **LINDONE.** 353,280. And **VICTRION.** 352,823. All goods included in Class 16. Johnson Fireclay Co., Ltd., Excelsior Works, Cliffe vale, Stoke-on-Trent.

TREBOR. 353,101. Sanitary porcelain lavatory basins and sinks. Class 16. R. Morrison, 117, West Regent-street, Glasgow.

352,616. All goods included in Class 15. The trade mark represents a smoke-stack with smoke coming therefrom. Schott & Gen, Glass Works, Otto-Schott-Strasse, 5, Jena, Germany. Address for service in the United Kingdom is c/o Carl Zeiss (London), Ltd., 13-14, Great Castle-street, W.

Earthenware and Pottery of common varieties to the weight of 68,635·7 metric tons, was imported into France during the first half of the current year. The figures show a marked increase.

PORCELAIN GLAZES.[1]

(*Continued from page* 943.)

RIEKE ("Sprechsaal," No. 46, 1907) found 3 CaO, Al_2O_3, 4 SiO_2 to be the most fusible mixture of these oxides. Since in such fusions it has been found that, of the calcium aluminum silicates, anorthite is the most readily formed, we can assume that Rieke's mixture was :—

$$CaOAl_2O_32SiO_2 + 2CaOSiO_2.$$

Now since Vogt found that orthoclase and anorthite formed a slight eutectic when mixed in equal proportions, we have as a most fusible mixture something of the following :—

$K_2OAl_2O_36SiO_2$ (orthoclase).
$CaOAl_2O_32SiO_2$ (anorthite).
$2CaO2SiO_2$ (wollastonite).

$$\left.\begin{matrix}1{\cdot}0\ K_2O\\ 3{\cdot}0\ CaO\end{matrix}\right\}\ 2\ Al_2O_3\ 10{\cdot}0\ SiO_2$$

Reducing this to 1 RO we have—

$$\left.\begin{matrix}0{\cdot}25\ K_2O\\ 0{\cdot}75\ CaO\end{matrix}\right\}\ 0{\cdot}5\ Al_2O_3\ 2{\cdot}5\ SiO_2,$$

which practically corresponds with our glaze, II., A1, and with the mixture which Seger (p. 236, Vol. I.) found to be the most fusible with this SiO_2 content (3·5). Since there is a eutectic between wollastonite and flint, and feldspar and flint, it is not surprising that Seger found it necessary to increase the SiO_2 from 2·5 to 4·0 in order to obtain greater fusibility (see cone 4).

Now, if we add clay to the above mixture together with the free SiO_2 necessary to retain the Al_2O_3—SiO_2 ratio of 1 : 6, there would not be any substance with which the clay could react chemically at these temperatures ; hence, clay would have to remain suspended in the molten matrix as undissolved material and as such would add to the opacity. Zinc added to this mixture in increasing amounts would at first cause easier fusion, and then progressively greater opacity. In case of corresponding members of each of the series in any one group, we have the CaO—ZnO ratio varying, i.e., as the ZnO increases the CaO decreases; hence, in these experiments we have the progressively increased opacity from series A to E due not only to the ZnO excess but also to the fact that we have less and less CaO to react with the clay, thus leaving more and more of the clay in suspension. Calcium oxide in any of these mixtures, therefore, can not be considered as an opacifier, either directly or indirectly in the manner suggested by Parmelee (p. 597, Vol. IX., "Trans. A.C.S.").

Comparison of the effect of CaO and ZnO in simple mixtures is obtained in V., A1 and V., E1. In V., A1 we have 0·5 equivalent feldspar and 0·5 equivalent whiting and in V., E1 we have 0·5 equivalent feldspar and 0·5 equivalent zinc.

Recalculating V., A1 into the mineral components which our best authorities say we would obtain, we find :—

0·25 equiv. leucite ($K_2OAl_2O_34SiO_2$)
0·25 equiv. orthoclase ($K_2OAl_2O_36SiO_2$)
0·50 equiv. wollastonite ($CaOSiO_2$)

This mixture at cone 7 is a good transparent glass badly crazed and so shrunk as to have left a border of unglazed tile on all the edges. That this mixture should be more fusible than feldspar is readily explained by laws of solutions, and we fail to see how Seger could have found this mixture so refractory (see Seger, p. 232, Vol. I.).

[1] By Ross C. Purdy, Columbus, O. The study here reported was made with the senior class at the Ohio State University. The study was made first by the class of 1910 and repeated with new mixes by the class of 1911. All weighings, &c., were made by two members of the class employed for that purpose. The report as here presented is a copy of the class report reprinted from Vol. XIII. of the Transactions of the American Ceramic Society.

Mixture V., E, on the other hand, covers the tile completely as a thin sheet of white enamel. It has considerable gloss, but its surface is pitted as though it had been affected by sulphur.

The zinc-feldspar mixture certainly is more fusible than feldspar alone, but at cone 7 it is far from being a homogeneous glass.

At cone 10, V., A1 has so attacked the body as to give the appearance of a thin perfectly clear glaze over a gray underslip, whereas at this same cone, V., E1 is a good white enamel, having a few craze marks as its only blemish.

E. Influence of Clay.—1. Replacement of Al_2O_3 from clay by Al_2O_3 from feldspar has no effect on opacity. 2. Increase of clay from member to member increases opacity. Reasons for these effects of variation in clay content have been given in the discussions under D.

F. Influence of Feldspar.—1. Increase of feldspar from group to group has little or no effect on opacity.

G. Influence of Heat Treatment.—1. Increased heat treatment has but slight effect on opacity, due, no doubt, to the fact that these glazes do not form perfect solutions in the temperature ranges included in this experiment. Increasing the heat treatment from cone 10 to cone 12 has caused the glazes to dissolve material from the body, producing the effect similar to a light gray underslip beneath a transparent glaze. Glazes which were transparent at the lower cones are still transparent at cone 12. The fact that the upper surfaces of the glazes are not made opaque by this dissolved material is due to the extreme viscosity of the glaze. That this lower layer is very light in colour even on a fire-clay body in a "flash" burn is worthy of study.

Heat Range.

A. Influence of Change of Ratio of RO to R_2O.—K_2O vs. CaO (Series A).—With 0·20—0·25 K_2O the glazes are hard slips except at cone 12. As the K_2O increases from 0·2 to 0·5, the ratio of Al_2O_3 to SiO_2 being constant, the glazes show fluidity at cone 7, with 0·33 K_2O 0·67 CaO, although the lack of good gloss of this same glaze at cones 8, 10, and 12 indicates that the progress of fusion is very slow and quiet, there not being sufficient SiO_2 present for perfect solution.

With 0·4 K_2O 0·6 CaO, Members 1 and 2 show, at cone 7, little more evidence of fluidity than those with less K_2O, but at cones 8 and 10 these glazes show evidence of boiling, while at cone 12 they are smooth coatings, but lack in gloss the same as that which those of the preceding series displayed at cone 12 and approached at cone 10.

With 0·5 K_2O 0·5 CaO, Members 1, 2, and 3 display this boiling tendency from cone 8 to cone 12, although at cone 12 these glazes, where thin, have attained the same degree of glassiness as those lower in K_2O.

The evidence indicates that with less than 0·4 K_2O the glazes pass from a slip to a glaze with little disturbance to its surface, except in the case of the 0·33 K_2O glazes at cone 7, and that none of the glazes in Series A, Groups I., II. and III. would be classed as matured unless it be at cone 12, which gives not a glaze but a shiny cintered slip. How far above cone 12 the members of these series could be carried before serious deterioration occurs cannot be determined from the evidence at hand, but it is doubted whether, with this Al_2O_3—SiO_2 ratio, a good bright glaze could be obtained.

The glazes of Series A, Group III., have the longest heat range within which they remain as smooth semi-glossy coatings and of the member of Series A, we find the maximum heat range with 0·55 equivalent of Al_2O_3.

K_2O vs. ZnO (Series E).—As the K_2O increases in this series at the expense of the ZnO, the first glaze which shows gloss at cone 7 is with 0·33 K_2O 0·67 ZnO. With

0·4 K_2O 0·6 ZnO we find the same evidence of boiling which was displayed in the analogous glazes of Series A.

At cone 8, Member 1 of Series E in Groups I. to IV. inclusive, and Member 2, Series E, Group V. are good glossy enamels, whereas the other members of this series either lack in gloss or have the pin-hole evidence of having boiled.

At cone 10 the only glazes in Series E which are smooth glossy enamels, free from this pin-hole blemish, are Members 1 and 2, Group II. and III., and Members 3 and 4 of Group V. (Members 2 and 3 of Series E, Group IV., are missing).

At cone 12 the glazes of Series E in Groups I to III. inclusive (being less than 0·4 K_2O) have suffered so from volatilisation of ZnO that they are mere scums. With 0·4 K_2O or more (Group IV. and V.), glazes of this series have resisted the tendency to volatilise, and are good with the exception of Member 5, Group IV., which has 0·8 Al_2O_3, and which shows a tendency to dryness.

The heat range (within which glazes of this RO are good glossy coatings) seems to depend entirely upon the ability of the glaze to hold the zinc from volatilising. With low feldspar and high clay (Groups I. and II., and Members 3 to 5, Groups III. and IV. and Member 5 of Group V.) the glaze cannot prevent volatilisation of the ZnO. When the ratio of feldspar to clay is higher, the glazes seem to have formed glasses of sufficiently high viscosity as to prevent volatilisation, and hence maintain a good glossy surface throughout longer range of heat treatment.

K_2O vs. CaO + ZnO.—

Cone 7.—The good glazes of this RO combination obtained at cone 7 are those of Series C and D, Group III. With K_2O less than 0·33 equivalent, we find lack of gloss, and with more than 0·333 equivalent K_2O we find that the glazes have pitted surfaces, and the appearance of having been solidified while boiling.

Cone 8.—The glazes of Series C and D have developed to good glazes in Group I. to IV. inclusive.

Cone 10.—We have good glazes in Members 1, 2 and 3 of Series C and D in Groups I. to IV. inclusive, and in Members 1 and 2 of Series D, Group V, and Members 1 and 2 of Series E, Groups II., III., and IV.

Cone 12.—None of the glazes can be said to be good at cone 12, because they have not smooth glossy surfaces. In general, when K_2O–CaO and ZnO are present as the RO, we have the longest heat range in Group III. and Group IV., Series C and D.

Feldspar vs. Clay.—As feldspar increases from group to group and the clay content proportionally decreased, the Al_2O_3 from clay is being replaced by Al_2O_3 from the feldspar. As the feldspar increases, the glazes change from slips in Group 1 to semi-glazes with glossy surfaces in Groups III. and IV. We find the longest heat range within which these mixtures maintain their maximum development as glazes or slips in Group III. when the ratio of CaO to ZnO is equal to or more than 1 : 1 and in Group IV. when the ratio of CaO to ZnO is less than 1 : 1.

Within any group of this study, addition of clay will shorten the heat range.

In a study of similar glazes, but containing 0·4 ZnO in all cases, and at least 0·05 equivalent clay, Purdy (Vol. 5, "Trans. A.C.S.") found that the most fusible glazes were obtained with 0·3–0·4 equivalent of feldspar. These experiments show that this conclusion is true when the ratio of ZnO to CaO is between 1 : 1 and 3 : 1.

Effect of Clay.

Fusibility.—Comparing the extremes of the series, it is noted that within any group, increase of clay decreases the fusibility of the mixtures. In Groups I. and II. we probably started (according to Purdy's curves, p. 158, Vol. V., "Trans. A.C.S.") with the most fusible mixtures, and added clay to them, while in the other groups, we started with mixtures which already had been made less fusible by additions of clay, hence we should expect to have increased refractoriness. A decrease of clay in Group 1 from 0·3 equivalent to 0·0 equivalent would no doubt have likewise decreased the fusibility of the glazes of this group.

By interpolating for points of 0·5 equivalent Al_2O_3 on Purdy's curves, we find that with this Al_2O_3 content there should be an increase in fusibility from Group I. to Group IV., and then a decrease to Group V. In Series C and D where we have somewhat the same RO combinations as used by Purdy, we find this same change in fusibility, the glazes of these series being at their best in Groups III. and IV. In Series A, however, we find that with equal Al_2O_3 content we apparently have increased fusibility with each increase of feldspar even from Group IV. to Group V.

Any additions of clay in Series C and D resulting in a content of Al_2O_3 of more than 0·5 equivalent would decrease the fusibility of the glazes, and so far as can be judged from the tiles, the ratio of this decrease is equal in all groups.

(*To be concluded.*)

AUCTION PRICES FOR POTTERY.

ONE is inclined to wonder whether the china and earthenware dealer or the auctioneer reaps the richer harvest out of his total deals. At any rate, it is intensely interesting to watch the results of auction sales in so far as they bear upon china, earthenware, and porcelain. The fabulous prices which certain pieces of pottery appear to be capable of commanding under the voluble and persuasive tongue of the skilled auctioneer are sometimes almost staggering, and we recall to mind numerous sales during the last few years which have become almost historical in their commercial importance. Everyone will remember the wonderfully high prices which resulted at the sales of the Bemrose and Solon collections, and even during the last three or four months some extremely interesting events have occurred in the transference of collections and heirlooms.

In June of this year, at Christie, Manson & Woods, when the collection was offered for sale of the late Mr. H. M. W. Oppenheim, financier, of 16, Bruton-street, a pair of famille-rose Mandarin jars and covers, 52 in. high, of the Kien Lung period, sold for 1,050 guineas, and a famille-rose cistern of the same period realised 320 guineas.

The same month witnessed an auction sale at the Art Gallery, Ipswich, by Garrod, Turner & Son, of certain effects of the late Mrs. Marriott, of Castleacre-street, Swaffham, when pieces to which only a moderate interest attached brought fairly high prices—considerably more than would be obtained for some of the really fine modern services.

At a sale at Leeds, also early in June, of the collection of old English porcelain and pottery belonging to Mr. Thompson Naylor, of Huddersfield, there was spirited bidding, and the attendance included buyers from all parts of this country, and as far afield as Canada. No less a sum than 2,254 guineas was realised, some of the principal items being the following :—

Part of a Worcester tea service, decorated in turquoise blue and marone, alternately striped, consisting of three cups without handles, small tea cup, coffee cup, five saucers and sucrier and cover—70 guineas ; a set of three Longton Hall vases, with panels painted on one side with classical landscape, and on the other with birds—205 guineas ; three lots of Chelsea figures, male and female,—36 guineas

each ; a pair of Chelsea figures, "The Pet Bird"—100 guineas ; a group of Bow ware, "Mars and Venus"—58 guineas ; a pair of Watteau figures (Bow)—68 guineas ; a pair of Bow figures, "The Masqueraders"—48 guineas ; a Chelsea-Derby group of five figures—33 guineas ; a framed Derby plaque painted fruit, signed "T. Steel, Pinxt"—38 guineas ; a Rockingham two-handled vase with shaped base, decorated with encrusted flowers, richly gilt, painted on one side with a view of Belvoir Castle, and on the other the "Eared Grebe"—46 guineas.

Early in July a sale at Cardiff by Mr. C. E. Dovey, of Clarke, Dovey & Co., of the effects of the late Mr. James Howell, of Grove House, Cardiff, was prolific of high prices. According to the "Cardiff News," a Swansea dessert service of 27 pieces decorated with flowers was sold for £16 10s. ; a Swansea dessert service of 27 pieces (plates impressed Swansea) and finely decorated with flowers and with gilt borders and handles realised £70 ; a crown Derby dessert service of 41 pieces decorated with blue and heavily gilt fetched £18 10s. ; a Nantgarw dessert service of 37 pieces decorated with wild flowers and gilt borders, painted by Pollard, and bearing the impressed mark "Nantgarw C.W.," evoked some spirited bidding. A start was made at £50, and it eventually rose to £195, at which figure it was knocked down to Mr. H. Winstone, of Cardiff. A Mason's ironstone vase realised £14 ; a Minton Indian tree pattern dinner service realised £14, while a Derby pattern Mason's ironstone dinner service fetched £13. Six willow pattern Swansea plates realised £3 12s. 6d. ; a Swansea plate, two cups and a saucer painted in landscapes with gilt borders, and marked "Swansea" in red ink, fetched £7, while £9 10s. was realised for a lot consisting of a Swansea bread and butter plate and cup and saucer and plate decorated with flowers and with the impressed trident mark. A Swansea afternoon tea service and tray, consisting of nine pieces, with the impressed "Swansea" mark, was sold for £35 ; a Worcester blue and white tea and coffee service was sold in several lots, realising an aggregate of £20 1s. 6d. ; a Staffordshire toby jug was knocked down for £2 5s. ; a Worcestershire dessert service, with 22 pieces, heavily gilt and with dark blue bands and a hand-painted and named landscape on each plate, was sold for £20 ; a porcelain panel 12 in. by 9 in., and exquisitely painted with flowers and vane, and supposed to be Nantgarw and the work of Billingsley, realised £8 10s. ; a Swansea dinner service decorated with sprays of flowers and comprising 36 pieces, realised £29 10s. There was spirited bidding for a Nantgarw tea and coffee service impressed "Nantgarw C.W." mark, beautifully decorated with roses on heavy gold bands, and consisting of 41 pieces. Bidding began at £30, and proceeded by bids of £5 to £85, and thence by bids of £2 10s. to £125. Subsequently it was knocked down to Mrs. Richards, of Swansea, for £128. A Swansea tea and coffee service marked "Swansea" in red letters, elaborately decorated with blue flowers and gold, the inside richly decorated with flowers in panels and blue and gold bands, and comprising 32 pieces, produced brisk bidding, the offers proceeding in bids of £5 to £120, and thence in bids of £2 10s. to £135, at which figure it was knocked down to a London dealer. A Swansea tea, and coffee service marked "Swansea" in red letters, and decorated with flowers with blue and gilt bands inside the cups, comprising 31 pieces, realised £18.

Finally, we have to refer briefly to the sale at Christie's, in July 17, of the property of the late Mrs. M. R. McGarel, the late Lord St. John, of Bletsoe, and others, when the following handsome prices were realised :—A Frankenthal group, "The Triumph of Love," three nymphs dancing round an obelisk, &c., 22 in. high—630 guineas ; another group of the same factory representing strolling players, 9½ in. high—360 guineas ; a Höchst group of "The Fortune Tellers," 6½ in. high—210 guineas ; a pair of Della-Robbia reliefs representing St. George and the Dragon and an angel holding a casket, 41 in. high—250 guineas ; a Dresden group of lovers, 7 in. high—400 guineas ; and "The Vauxhall Figures," a pair of Chelsea figures in masquerade costume, 7¾ in. and 8¼ in. high—240 guineas.

The figures seem to suggest that, should he be offered a heirloom at a fixed price by an owner who prefers this course to placing his relic under the caprice of the hammer, the china dealer would be well advised, first to test the bona fides of the deal, and then to see if he cannot turn the transaction to good account. The writer has recently come across a concrete illustration of the slackness of a dealer in regard to an antique English tea service. A Potteries representative, passing the shop, was staggered to see just what he had been looking for. He entered the shop and bartered for the prize, which he subsequently purchased for a ten pound note. Immediately the deal was completed, and the shopkeeper learned from his customer the particular make of the service, he began to bid in order to reclaim it. But the representative took it to his firm, and though they have been offered as much as five times the purchase price to send it back, needless to say it has not gone.

Such opportunities do not come every day. When they do come, the dealer for his part should take good care that they do not go begging. The auctioneer gets his prices for the relics. Why ? Because he knows exactly what he is selling, and if he does not know he goes to considerable trouble to find out. This is precisely what every dealer is also recommended to do.

Recipes for Opaque Blue Glass are given as follows by "Sprechsaal" :—(1) Sand 100 parts, soda 15, potash 13, cryolite 10, fluorspar 8, felspar 18, limestone 12, copper sulphate 3 to 4, smalt 0·5 part. (2) Sand 100 parts, potash 18, cryolite 14, lime 6, borax 4, red lead 10, native alum 2, copper sulphate 6, smalt 0·2, cullet 20 parts. (3) Sand 7,000 parts, soda 1,200, potash 400, red lead 200, cryolite 1,100, copper sulphate 60 to 80, cobalt oxide 1 to 3 parts. A cheaper metal is compounded from : Sand 7,500 parts, soda 1,800, felspar 1,200, fluorspar 1,400, copper sulphate 100 to 125, cobalt oxide 1 to 3 parts. Another cheap metal, but one requiring greater heat in the furnace, consists of : Sand 7,500 parts, soda 1,800, potash 500, bones 1,400, lime 300, copper sulphate 60 to 80, cobalt oxide 1 to 3 parts. (4) Sand 8,500 parts, soda 2,300, potash 600, cryolite 600 to 800, black copper oxide 100, copper sulphate 50 parts. (5) Sand 10,000 parts, soda 1,000, potash 2,500, red lead 800, saltpetre 300, ground marble 10,000, bone ash 1,800, cobalt oxide 1 part. (6) Sand 10,000 parts, soda 1,500, potash 2,000, red lead 500, saltpetre 200, calc spar 800, cryolite 1,200, copper sulphate 200, cobalt oxide 0·5 part. (7) Sand 10,000 parts, soda 3,000, felspar 1,500, fluorspar 1,000, potash 800, cryolite 1,000, red lead 400, copper oxide 25, cobalt oxide 15 parts. (8) Sand 100 parts, potash 25, red lead 80, saltpetre 10, copper oxide 1¼ parts. For deeper blue take 4 to 6 parts of copper oxide and 0·03 part of cobalt oxide. (9) Sand 100 parts, soda 10, potash 12, red lead 10, cryolite 15, saltpetre 8, borax 3 parts ; colouring material as for (8). (10) Sand 1,000 parts, soda 80, potash 170, red lead 100, cryolite 140, saltpetre 35, borax 20, copper oxide 11 parts. (11) Sand 100 parts, potash from molasses residue 16, red lead 8, lime 2, cryolite 14, copper sulphate 2, cobalt oxide 0·03 part. (12) Sand 100 parts, potash 30, soda 6, Glauber salt 2, borax 1, bone ash 25, lime 5, copper sulphate 4, cullet 50 parts.

THE EMPLOYMENT OF GOLD CERAMICS.

(SPECIALLY TRANSLATED.)

GOLD, writes Mr. A. Granger, in "La Céramique," is one of the rare metals which are used solely in the metallic state in ceramics, unlike copper, antimony, manganese, chromium, &c., which are employed in the conition of oxides. It finds application in two very different ways—for gilding, and for decoration in colours; the metal in the former case being laid on the ware and fixed by firing with a flux, whilst in the second case its facility of solution in certain fluxes, to produce coloured effects (violet, purple to pink), is utilised.

GILDING.

Owing to its brilliant colour, lustre and resistance to oxidation, gold possesses properties of extreme value for gilding ceramic ware. Of course, it cannot be applied in the form of coarse grains, since this would not produce any agreeable effect, and it is therefore necessary to reduce the metal to a state of fine division, like ordinary pigments, the fine powder being mixed with the requisite flux and a vehicle before being laid on the ware.

This fine state of division is attained by chemical means, which produce a powder of such fineness that could not easily be obtained by mechanical agency. For this purpose the sheet metal is dissolved in aqua regia, a mixture of hydrochloric and nitric acids, which acts by the liberation of chlorine. Theoretically, the weights of the two acids necessary to dissolve one atom (197 parts by weight) of gold are:—Nitric acid (36 deg. Baumé) 119 parts, hydrochloric acid (22 deg. B.) 303 parts, a proportion which approximates to the figures usually taken in practice: nitric acid 1 part, hydrochloric acid 3 parts. Brongniart and Salvetat used higher proportions of nitric acid, but these recipes were attended with the drawback that the excess of nitric acid was quite useless, and, in addition, the quantities of liquid needed to dissolve a given weight of gold were too large. For dissolving 100 parts of gold, 60 parts of nitric acid and 154 parts of hydrochloric acid (of above strengths) are needed; but, owing to the loss sustained in consequence of secondary reactions, a small additional quantity, in the same proportions, must be added at the close of the operation to render solution complete. If the operation has been conducted properly, this addition will not need to be more than about 20 parts.

The gold dissolves by combining with the liberated chlorine, to form gold trichloride, and the next step is to treat the solution with a reagent which will displace the gold from combination and throw it down as a precipitate. The substances capable of producing this effect are numerous; but since the precipitate must be of extremely fine grain for use in ceramics, the ferrous salts and mercurous nitrate are the only suitable reagents. The former give a very finely divided gold, and a more solid gilding than that furnished by mercurous nitrate; but it has the drawback of lower covering power, and, therefore, cannot be used except for expensive ware.

When gold chloride is precipitated with ferrous sulphate, three molecules of the latter are required to each molecule of the chloride, and in the course of the reaction the iron passes from the divalent into the trivalent condition, ferric sulphate and ferric chloride being formed and metallic gold deposited from solution. The amount of crystalline ferrous sulphate required to precipitate 100 parts of gold is 423 parts by weight, provided the solution does not contain any excess of nitric acid and nitro products. Hydrochloric acid has no action on ferrous sulphate, but nitric acid undergoes reduction, with formation of ferric sulphate and liberation of nitrous fumes, consequently, any excess of nitric acid in the aqua regia for dissolving the gold merely entails useless expense. The precipitation must not be effected from a concentrated solution, or the gold will be too coarse in grain, and the above mentioned quantity of solution must be diluted to about 12,000 parts. The ferrous sulphate solution should be perfectly clear, and should be added so long as a precipitate continues to form.

When all the gold is down, it should be left at rest for several hours, and is then washed by repeated decantations in order to remove all traces of ferric salts. The gold should be dried at a moderate temperature, since otherwise it becomes hard, is difficult to grind, and does not brown readily afterward. The operation is preferably conducted on a water bath.

The gold precipitated by means of ferrous sulphate is rather dense for industrial use, and mercurous nitrate is therefore preferred, the method being as follows:—The first step is to prepare the mercurous nitrate by the action of nitric acid on metallic mercury. The old formulæ of Brongniart and Salvetat prescribed the use of an excess of acid, but the correct proportions are:—Nitric acid (36 deg. B.) 480 parts by weight, and metallic mercury 600 parts. The operation should be carried on in the cold, except for a gentle heating toward the end if solution is found to proceed too slowly. The cold solution is poured into the cold solution of gold chloride prepared as already described. Six atoms (1,200 parts of mercury are required to precipitate 2 atoms (394 parts) of gold, that is to say, a solution of 310 parts of mercury in 233 of nitric acid will be needed to throw down 100 parts of gold. The metal comes down in flakes, which are carefully washed, and after the final washing the metal is left to settle down, the excess of water being removed by decantation, and the residue dried on a water bath.

The gold cannot be applied directly to the glazed ware, but must be mixed with a flux to enable it to adhere. The soft glazes, such as are used on soft porcelain, are comparatively fusible, and will soften sufficiently in a muffle to fix the applied metal. A mixture of bismuth oxide and borax is used as the flux, being prepared from bismuth nitrate, which decomposes with formation of the oxide when heated. The proportions taken are, 12 parts of bismuth nitrate to 1 part of fused borax. The mixture of gold and flux is triturated on glass, and should be left to stand for a while afterwards, experience teaching that it then runs better from the brush.

Owing to the high price of gold, numerous attempts have been made to minimise the quantity consumed. One method is to dilute it with a volatile medium, which is dissipated by the baking process. The oxides of mercury fulfil this condition, the black (mercurous) oxide being occasionally preferred to the red. Larcheveque recommends the following proportions:—Precipitated gold 30 parts, mercurous (black) oxide 15, basic bismuth nitrate 2·5, fused borax 0·3. The black oxide is prepared by dissolving 120 grms. of metallic mercury in 100 c.c. of nitric acid in the cold, the solution being left for several days, after which the crystals formed are dissolved in hot distilled water, and the solution is made up to 2,500 c.c. A mixture of 50 c.c. of ammonia (22 deg. B.) and 400 c.c. of distilled water is poured into this solution, and the resulting precipitate is dried out of contact with air and light. A greenish tinge is imparted by adding 3 grms. of silver carbonate to the above preparation.

When the gold has been applied to the ware it is baked in a muffle furnace in order to fix the metal by means of the flux. On issuing from the muffle the gold is dull, and

in order to make it bright it has to be burnished with hæmatite or agate burnishers.

Bright Gold.—Cheap gilding is effected by the aid of a preparation known as bright gold, because it is already bright on coming from the muffle and needs no burnishing. The first preparation of this kind was brought out at the Royal Saxon Porcelain Works, Meissen, and was known as Meissen gold; but the method has not been divulged.

Next in order of date is that of Dutertre, who proceeded by dissolving 32 parts of gold in a mixture of 128 parts of nitric acid and an equal weight of hydrochloric acid, and treated the solution with 0·12 part of metallic tin and 0·12 of antimony chloride, the liquid being finally diluted with 500 parts of water. Another solution was prepared from sulphur 16 parts, Venice turpentine 16, and oil of turpentine 80 parts, heated until perfectly clear, and then mixed with 50 parts of lavender essence.

The gold solution was then poured into the sulphur preparation, heat and agitation being employed to cause the two to mix so that the whole of the gold passed into the oils, whereupon the supernatant layer of acid liquor is poured off. The elimination of the acids is completed by washing, and when the last traces of moisture have been removed as completely as possible, 65 parts of lavender oil and 100 of oil of turpentine are added, heat being applied to facilitate mixing. The clarified portion is transferred to a separate vessel containing 5 parts of bismuth flux, the liquid being suitably warmed for use. This class of preparation is now extensively used, and large quantities are made in Germany.

A slightly different formula, of English origin, consists in dissolving 20 parts of gold in 20 of nitric acid, and 60 of hydrochloric acid, the gold being added in small quantities at a time. The organic solvent is composed of Gorgona balsam 42 parts, amber oil 24, and oil of rosemary 1 part. In another a resinate is employed, the following proportions being suitable:—Gold chloride 100, lavender oil 900, basic bismuth nitrate 5, chromium resinate 50 parts, the gold solution being poured into the mixed other ingredients. The chromium resinate is prepared by dissolving 1,000 parts of resin soap in 2,000 parts of water and adding 500 parts of chrome alum. The resin soap is made by heating 500 parts of powdered resin with 100 of caustic soda dissolved in 200 of water, the resulting yellow mass being washed and dried. The preparations of German origin seem to be based on different organic compounds than the balsams of sulphur described above, and are prepared by means of sulphonated ethers, such as those of the butylic series.

The reason for the cheapness of this bright gold is that it can be applied to the ware as an extremely tenuous film, all that is needed being to use a sufficiently dilute solution. On the other hand, the resulting gold is rather garish, and is lacking in solidity, on which account it is often used in association with precipitated gold, the latter forming the groundwork of the decoration, whilst the former supplies the brilliance.

Gold as a Pigment.

As stated already, gold dissolves in certain glasses, which it colours pink to carmine and ruby according to the preparation employed. It may be used in pigments, enamels, or glazes, and we shall now describe its application as a muffle pigment, enamel, underglaze colour, and coloured enamel.

Purple of Cassius and Gold Lakes.—The property of gold for staining glass was first discovered by Neri (1630-1703). The pigment now employed for muffle colours is purple of Cassius, a preparation obtained by precipitating metallic gold in presence of a hydroxide, preferably that of tin. For this purpose a solution of stannous chloride, or a mixture of stannous and stannic chlorides, is poured into a solution of gold chloride. The stannous chloride is transformed into stannic chloride, by abstracting chlorine from the gold chloride and throwing down the latter metal. In consequence, however, of a secondary reaction, whereby a portion of the tin chloride is thrown down as a hydroxide or oxychloride by the action of the water present, the gold is deposited on this precipitate as a lake—not, as was formerly believed, in the form of a definite compound, a gold chlorostannate.

The operation entails certain precautions. In the first stage, dissolving the gold, Robert formerly employed at Sèvres a solvent composed of 4 parts of nitric acid (36 deg.) and 1 part of ammonium chloride, which latter substance, however, merely reduces, unnecessarily, a portion of the nitric acid. The Bunel formula consisted in dissolving the gold in a minimum quantity of aqua regia and treating it with a mixed solution of stannous and stannic chlorides prepared by dissolving tin (4 parts to each 1 of gold) in dilute aqua regia. Bolley recommended dissolving 10 grms. of ammonium chlorostannate in 40 of water, in presence of 1·07 grm. of metallic tin, this stannous solution being then diluted with 140 grms. of water and employed for precipitating the gold in a solution obtained by treating 1·34 grm. of gold with a minimum of aqua regia and diluted with 480 grms. of water. Brongniart, again, used an aqua regia consisting of 16·8 grms. of hydrochloric acid and 10·2 of nitric acid, taking 9 grms. of this to dissolve 0·5 grm. of gold and diluting the solution with 15 litres of water. The tin solution was prepared by gradually introducing 3 grms. of sheet tin into 18 grms. of the same aqua regia diluted with 3-5 grms. of water, the liquid being kept cool. The gold solution was added drop by drop, and the precipitate formed had the colour of old wine.

According to Fuchs, a clear solution of stannous chloride is poured into a solution of ferric chloride until the colour of the latter changes to green, that is to say, the ferric chloride has been converted into the ferrous state. This tin-iron solution is treated with gold chloride dissolved in 300-400 parts of water, and the mixture is well stirred. The brownish precipitate is filtered, washed, and dried. Fiquier was the first to make really scientific investigations into the nature of purple of Cassius, though he failed to reveal its true character, tried to prepare it by the dry method. For this purpose, he heated a small quantity of anhydrous borax to redness in a crucible, and then introduced 150 parts of silver, 20 of gold, and 35·1 of tin, the whole being heated until a homogeneous alloy was obtained. After cooling, the crucible was broken, the borax extracted with boiling water, and the metal treated with nitric acid, which dissolved out the silver, leaving the gold and tin in the form of purple, as the result of oxidation. This method is merely given as a curiosity.

Wachter states that purples of different shades may be prepared in the following manner:—

Deep Purple.—Dissolve 0·5 grm. of gold in a minimum of aqua regia, afterwards diluting the solution to make 10 litres, and treating it with a solution containing 7·5 grms. of stannous chloride, a few drops of suphuric acid being added.

Light Purple.—Five grms. of tin are dissolved in 3 parts of hydrochloric acid and 1 of nitric acid, the mixture being evaporated on the water bath, and the residue taken up with distilled water. This solution is mixed with one containing 2 grms. of stannous chloride in 10 litres, and treated with 0·5 grm. of gold (as chloride) dissolved in 50 grms. of ammonia. The precipitate comes down in a short time.

(*To be continued.*)

TITANIC ACID IN UNDERGLAZE COLOURS.

(SPECIALLY TRANSLATED.)

HITHERTO the expensive metallic oxides of the platinum group, and preferably iridium oxide, have formed the main source for obtaining dark grey to deep black tones; but A. Berge, writing in "Sprechsaal," states that satisfactory results have now been attained by the use of titanic acid, either alone or in conjunction with other oxides, in a reducing atmosphere. The pigmentary action of titanic acid was already known, but was ascribed entirely to the ferric oxide present in the rutile used. Parallel experiments conducted with rutile and titanic acid have, however, shown that such is not the case.

The pigments were prepared by grinding rutile or pure titanic acid with the other oxides by the wet method, and then calcining the dried preparation. The latter was applied to the biscuit ware, with and without addition of fritt, the pigments being fired at the fusing point of silver and afterwards glazed. The biscuit ware consisted of felspar stoneware, fine stoneware, and soft porcelain (SK_9). The stoneware glaze employed corresponded to the formula 2·0 SiO_2, 0·15 Al_2O_3, 0·40 B_2O_3, 0·4 PbO, 0·2 MgO, 0·1 K_2O 0·3 CaO, the proportions being: Red lead 91·20 parts, magnesite 16·80, felspar 55·6, marble 30, Zettlitz kaolin 12·9, crystallised boric acid 49·6, Hohenboka sand 78 parts. The glaze for the fine stoneware was compounded of felspar 111·2, Zettlitz kaolin 51·6, Hohenboka sand 114·0, marble 70·0, magnesite 8·4 parts, and that for the porcelain felspar 278 parts, Zettlitz kaolin 103·2, Hohenboka sand 312·0, magnesite 42·0 parts. The finishing kiln temperatures were as follow:—Stoneware, Seger cone, 010; fine stoneware, cone 7; and porcelain, cone 10.

A. Experiments with Rutile.—The colourings produced with rutile in association with different oxides are tabulated below:—

Adjunct.	On Stoneware.	On Fine Stoneware.	On Porcelain.
1. Uranium oxide 10% ...	Brownish yellow	Greyish brown	Greyish black
2. Cobalt oxide 5%	Greyish green	Blue black	Blueblack
3. Ferric oxide 5%	Dark golden yellow	Brownish black	Greyish black
4. Nickel oxide 5%	Do.	Do.	Do.
5. Cupric oxide 5%	Olive green	Greyish black	Do.
6. Manganese oxide 5%...	Fawn	Do.	Do.
7. Chromic oxide	Deep brown	Brownish black	Brownish black

These results appear to show that, for stoneware at least, the pigmentary action is principally due to the iron in the rutile, the effect being merely intensified by uranium oxide and ferric oxide, whilst nickel oxide proved incapable of affecting the tone. The other and more powerful oxides had little effect—manganese oxide and chromic oxide, for instance, merely rendering the brownish yellow much darker. Hence, in comparison with the colourings produced by equal percentages of these oxides in combination with silica, it must be assumed that the iron in the rutile prevents the full action of the added oxides.

In the case of the soft porcelain, the slight difference in the colours obtained all through is remarkable, these being really dark greys. This peculiarity is attributable to the fact that the reducing atmosphere prevented the added oxides from effectual action, the resulting colours being produced by the rutile, i.e., the titanic acid, alone, an assumption that is confirmed by the experiments with titanic acid.

B. Titanic Acid.—The pure titanic acid used was mixed with larger proportions of the other metallic oxides in order to bring their influence into greater prominence. The following results were obtained:—

Pigment.	Stoneware.	Fine Stoneware.	Porcelain.
8. Titanic acid, 2 parts. Cobalt oxide, 1	Dark blue	Dark blue	Blue-black
9. Titanic acid, 1 ..... Aluminium hydrate, 1 Cupric oxide, 1	Pale green (pigment rose)	Reddish grey (pigment rose)	Grey-black
10. Titanic acid, 2 ..... Uranium oxide, 1	Pale yellow	Dark grey	Grey-black
11. Titanic acid, 2 ..... Nickel carbonate, 1	Deep yellow	Light grey	Light grey
12. Titanic acid, 2 ..... Chromic oxide, 1	Dark olive green	Greyish green	Greenish grey
13. Titanic acid, 2 ..... Manganese oxide, 1	Brownish violet (pigment rose)	Brown-yellow	Brown-yellow

Apart from Nos. 8, 9, and 13, which rose slightly under stoneware glaze, all the pigments stood well. Under fine stoneware glaze the shades were less pure, owing apparently to the effect of the iron in the body. In any event, however, the reducing effect of the fire manifested itself already here, lowering the pigmentary power of the metallic oxides and imparting a grey or greyish black tinge, which became more decided on the porcelain ware, greys being mostly produced in the latter case. These greys were deepened towards black by cobalt oxide, cupric oxide, and uranium oxide, but tinged green by chromic oxide and yellow by manganese oxide.

For further experiments mixed pigments were prepared from several metallic oxides, molybdic and tungstic acids being also added in some cases. Owing to the tendency of the pigment film to curl up under stoneware glaze, a fritt was employed, having the composition 1·0 SiO_2, 1·0PbO in the proportion of 1 part to 10 of pigment. This produced the desired result. As in the other experiments, the stoneware specimens were fired in the muffle, the fine stoneware and porcelain in the porcelain kiln. The following results were obtained:—

Pigment.	Stoneware.	Fine Stoneware.	Porcelain.
14. Pure titanic acid	Pale yellow	Light brown (Greyish brown in thicker layers)	Grey
15. Titanic acid, 1 part.. Molybdic acid, 1	Dirty white	Greyish black	Dark grey to black
16. Titanic acid, 1 ..... Tungstic acid, 1	Dirty yellow	Grey	Dark grey (pale grey in thicker layers)
17. Titanic acid, 10..... Manganese oxide, 1	Pale yellow-brown	Greyish brown	Dark grey
18. Titanic acid, 10 ..... Manganese oxide, 1 Molybdic acid, 2	Do.	Greyish black	Blackish grey
19. Titanic acid, 16 ..... Aluminium hydrate, 1 Cupric oxide, 1	Do.	Dark grey	Greyish black
20. Pigment 18, 1..... Tungstic acid, 1	Light brown	Greyish brown	Dark grey
21. Rutile, 5 ..... Molybdic acid, 1	Brownish yellow	Brownish black pale blue in parts	Blackish grey
22. Rutile, 5 ..... Molybdic acid, 1 Tungstic acid, 1	Do.	Blackish grey, with pale blue streaks.	Blackish grey

The results of these experiments confirm in the main those with pigments Nos. 8 to 13. Pure titanic acid was only able to produce a pale yellow shade under stoneware glaze, in contrast to the deep yellow tones obtained (as mentioned in the literature) with rutile. Molybdic acid and tungstic acid had practically no effect on the pale yellow coloration, whereas manganese oxide and cupric oxide darkened it in the direction of brown, this being also observed in the case of rutile. This latter substance itself, however, gave no reaction with tungstic or molybdic acid.

The disturbing influence of the iron in the fine stoneware body was again adverse to correct observation in this series, and the grey-browns on porcelain were difficult to

differentiate with accuracy. On the other hand, it was again clear that titanic acid alone produces a pure grey, which is deepened into black by metallic oxides and molybdic acid, whilst tungstic acid toned the colour to pale grey. The reducing atmosphere of the porcelain kiln seems to form a lower oxide of titanium, which imparts a grey to black colour to the ware, like the finely divided metals of the platinum group, and capable of being deepened by the addition of other metallic oxides, provided the latter are able to produce any appreciable pigmentary effect at the temperature of Seger cone 10.

The effect of an oxidising atmosphere on the colours was also investigated ; but as the appliances at disposal did not enable these experiments to be carried on under the same conditions as in the reducing fire, the results are not strictly comparable, especially since only a selection of the pigments could be fired on fine stoneware at the temperature of cone No. 7. Nevertheless, the colourings obtained differed so completely from those produced in a reducing atmosphere that they cannot be omitted from consideration :—

	Pigment.	Colouring.
8.	Titanic acid, 2 parts Cobalt oxide, 1	Dark blue, somewhat paler in thick layers
10.	Titanic acid, 2 Uranium oxide, 1	Greyish brown
11.	Titanic acid, 2 Nickel carbonate, 1	Do.
12.	Titanic acid, 2 Chromic oxide, 1	Olive grey
13.	Titanic acid, 2 Manganese oxide, 1	Light brown
14.	Pure titanic acid	Straw yellow
15.	Titanic acid, 1 Molybdic acid, 1	Greyish white
16.	Titanic acid, 1 Tungstic acid, 2	Greyish yellow
17.	Titanic acid, 10 Manganese oxide, 1	Golden yellow
18.	Titanic acid, 10 Manganese oxide, 1 Molybdic acid, 2	Olive grey
19.	Titanic acid, 16 Aluminium hydrate, 1 Cupric oxide, 1	Greyish yellow

Thus, whilst the colours obtained with cobalt and manganese respectively were the only ones which did not differ from those obtained in the reducing fire, uranium oxide and nickel oxide in conjunction with titanic acid gave decidedly brown tones, as compared with grey in a reducing atmosphere. Tungstic acid was unable to mask the yellow of titanic acid, and manganese deepened this yellow to golden, converted into a delicate greyish green by molybdic acid. A pleasing greyish yellow was obtained with cupric oxide and titanic acid.

In summarising the results it may be said that titanic acid is able to produce dark grey to black tones on soft porcelain when used in conjunction with metallic oxides which retain their pigmentary properties in the glost kiln, and fired at the temperature of Seger cone 9 to 10. It is therefore suitable, to some extent, as a cheap substitute for the more expensive metals of the platinum group, especially when used in the form of rutile, which is comparatively cheap owing to its considerable percentage of iron.

For the production of certain olive green, brown, and yellow shades, titanic acid, in a more or less pure condition, can also be used as an under-glaze pigment for fine stoneware, if fired in an oxidising atmosphere at the temperature of cone 7 to 9. Finally, either in the pure state or as rutile, titanic acid can be used alone, or in combination with the usual pigmentary metallic oxides, produce quite remarkable colour effects on stoneware, the most important being olive greens, browns, and yellows.

THE USE OF CLAY AND GLASS WARE IN CHEMICAL INDUSTRY.*

IT would be impossible in a single lecture to deal in detail with the various clay and glasswares used in chemical industry, so that only a general discussion of such wares was attempted. The two varieties of clay most extensively employed in the construction of plant for manufacturing operations are refractory clays and stoneware, or vitrifiable clays. The first desideratum in the former is of course the power of resisting the prolonged action of high temperatures, a power which is influenced partly by the chemical composition and partly by the physical character of the clay. The effects of the various essential and fluxing constituents of clays were briefly reviewed, and, also, the influence of the fineness of the ultimate particles of the clay, as distinct from the sizes of the particles due to grinding, on the fusibility. The actual value of refractory materials in practice, however, is dependent upon a number of other considerations such as the fluxing effect of the fine dust derived from the fuel, the capacity for resisting mechanical erosion, chemical action, sudden changes of temperature and the like. The solvent action of molten slags and powerful chemical mixtures, such as molten glass, is, of course, inhibited to some extent by employing densely burnt materials, but, on the other hand, these are less able to withstand changes of temperature, so that in many cases the proper selection of the best material must be arrived at by a method of compromise between conflicting results. A brief outline was given of some of the main requirements demanded of refractory clay wares in metallurgical, coal and coke, cement, pottery and glass industries.

Besides the actual resistance to high temperatures, there are a number of other physical properties involved in the use of refractory clays which are often overlooked, such as expansion by heat, specific heat, and conductivity for heat. The last is specially important, as it affects the rate at which heat is transmitted from the fuel to the raw materials under treatment, and, therefore, influences economy both in fuel and time. The conductivity of firebrick, for example, is about half that of sand or carborundum, but twice that of kieselguhr. The second variety of clays extensively used in the construction of plant, is that comprising the " stoneware " or vitrifiable clays. Their wide application is due to the facts that they possess good plasticity, which enables them to be used for large and complicated shapes, and that they burn to a dense body at relatively low temperatures, and are, to a large extent, impervious to the flow of liquids, a property which is generally enhanced by salt-glazing. Articles of this kind are largely employed in acid manufacture, and the chief requirements of such goods are that they should be able to resist considerable internal and external pressure, be thoroughly vitrified and uniformly glazed and of course resistant to the action of acids. Glass vessels are employed in the manufacture of nitric acid, and also in the well-known form of " carboys " for the storage of acids. Glass possesses great resistance to the action of chemicals, but its chief disadvantages are its frangibility and its incapacity to withstand changes of temperature, and its use for manufacturing operations is being superseded to a large extent by fused silica ware. Owing to the low co-efficient of expansion of the latter, it can withstand very sudden changes of temperature, and is also capable of resisting heat up to temperatures of about 1,200 deg. C. without deterioration.

* Abstract of paper read by Walter C. Hancock, B.A., F.I.C., at the Chemical Industries Exhibition.

THE ENGLISH CERAMIC SOCIETY.

SHORTLY before the conclusion of the last session of the English Ceramic Society, a paper was contributed thereto by Mr. C. E. Ramsden, of Stoke-on-Trent, under the title "A Study of the Chromium Red Glaze," which we were unable to notice at the time owing to its not being formally read. We now have an opportunity of printing some portions of it, which may have some interest for those engaged in the technical branches of the potting trade.

In his introduction Mr. Ramsden suggested that a few experiments, made by adding a definite quantity of prepared chromium-tin-calcium red or "underglaze pink" colour to glazes of widely different composition, would demonstrate the sensitive and fugitive character of this very useful ceramic colour medium. Its great tinctorial power, combined with its susceptibility to the influence of kiln atmosphere and to the duration and temperature of firing, rendered it a very difficult though interesting technical problem, the study of which, exclusive of the questions involved in deciding upon the most favourable heat treatment, might be divided into two parts: (a) the production of the most stable calcined stain of strong colouring power, and (b) the best glaze, maturing at the temperature required, which would develop and display the pleasing blood-red tint. The first part he had investigated and discussed in previous communications, while part (b) was the subject of the present study, though it would be a mistake to assume that the latter question was not dependent upon the former. Thus it would be expedient for him to state briefly the important points to be observed in the production of the best stain or colour frit for use in glaze experiments.

(a) An intimate mixture of stannic oxide and calcium oxide in about equimolecular proportions; (b) the mixture to be strongly calcined at a temperature of 1,250 deg. to 1,300 deg.—the period of burning usually occupied about 90 hours, followed by several days' cooling. A second calcination ensured a stable dark colour; (c) after grinding on a pan for from 30 to 40 hours, the colour frit was washed with water by decanting off the yellow solution of chromates. This operation was continued until the supernatant water appeared clear.

The period and temperature of calcination had an important influence on the stability and tinctorial effect of the colour. In the opposite degree, the same considerations applied to the firing of crimson glazes, particularly when it was desired to obtain a dark blood-red tint, which, so far as the essayist's experience was concerned, could not be obtained when the glaze was heated to a temperature higher than 1,050 deg. C., and providing the glaze composition was favourable, a purer red tint would be obtained at 1,000 deg.

The glazes were all fritted before admixture with the stain, and were melted in a muffle kiln heated to 1,000 deg. C. (cone 05), this temperature being reached in about 30 hours. The particulars of the method of preparation of the trials would be found in previous communications. To 100 parts of frit seven parts of stain were added in every instance.

The history of chrome-tin-pink, or chromium-red, was somewhat obscure. According to L. Franchet, the colour was discovered in 1835 by Booth, of Staffordshire, and the so-called majolica glazes were first introduced about 1853 by Arnoux, of the Minton Pottery, Stoke-on-Trent. That the pink powder was known in 1836 might be inferred from the work of J. Malaguti, who then described the preparation of his pink coloured "laque minerale," and whose analysis of a sample of the "English rose pink" was mentioned by Brongniart in his "Traité des Artes Céramiques." Although Simeon Shaw, in his "Chemistry of Pottery," published in 1837, did not state the name of the discoverer of this useful colour, he gave a recipe which, however, from the large proportion of chromic oxide therein, would probably result in the production of a green. While it was evident that at that date the secret was known to but few, they could assume that it was an English discovery, and probably that of a Staffordshire man, who might have been the Mr. Enoch Booth to whom Simeon Shaw (Ibid.) ascribed the distinction of being the first to use white lead for glazing pottery. The great care with which the secret of its production was at first preserved might be gathered from information which had come to the writer that the metallic tin used in compounding the colour was brought to the Potteries by road under the cloak of darkness, and under armed escort. This was, of course, in the days prior to railway facilities. It was generally supposed that the colour was obtained from gold, and in consequence a very high price was obtained by Mr. Booth for his product.

When a chrome-tin-pink, prepared according to the directions already mentioned, was mixed with a lead silicate, or lead borosilicate, the colour was destroyed and some of it was dissolved. The replacement of some or all of the lead by alkalies, or the introduction of alumina, did not prevent the total annihilation of the colour as long as the mixture melted to form a bright glaze. Of course, if the temperature was not high enough to produce perfect fusion, the attack was arrested or its completion suspended, just the same as when a large excess of stain was added. It remained to discover some oxide which would protect the pink colour from dissolution. If to any one of these glazes or mixed silicates a little lime (1 to 7 per cent.) or some calcium compound was added the pink colour remained after firing, and the depth of tint varied directly with the proportion of lime up to a certain point.

The essayist appended here a table which showed that if lime was increased at the expense of lead oxide, the tint was deepened, though the translucency of the glaze was diminished. Amongst other conclusions, it would be seen from the table that potash had the same influence on the tint of the glaze as soda, though, when compared with the latter, it appeared to reduce fusibility slightly. Results also confirmed the statement that the alkaline oxides gave the crimson glaze a violet or lilac shade, a glaze which contained no alkalies being quite free; the latter glaze was less fusible and more opaque, while the surface "scum" was nearly absent. Hence soda or potash was necessary to impart fluidity and translucency, producing a glaze melting at a low temperature; yet these oxides could not be used to replace lead oxide on account of their adverse effect on the quality of the red colour. Moreover, a glaze without alkalies was much more likely to crystallise or devitrify, and it would be viscous during fusion unless it contained much boric acid.

A further table confirmed the results embodied in the first, inasmuch as it showed that the alkali oxides, when substituted for lead oxide, had a detrimental influence on the tint, making the crimson glaze paler and more lilac. The purity of the shade could be restored by adding silica, and this explained the production of a more agreeable tint on a siliceous white body when compared with a dense clay. The results obtained indicated that for a blood-red the alkalies must be kept as low as possible, since alkaline silicates appeared to make the tint more sensitive to prolonged heating. Lead oxide, on the contrary, might be used in moderate "excess" without injury to the colour.

A further series of trials were afterwards made to show the relations of PbO and CaO, and from a table of the results it was clear that within the limits shown, lead oxide and calcium oxide were interchangeable regarding their influence on the glaze tint, the ratio PbO : CaO being governed entirely by the brightness and fusibility required. The question then arose whether the presence of soda and potash would affect this ratio. To ascertain this a further series of trials was made, which showed that the tint remained the same when lead oxide and lime were interchanged between extremes indicated, whether the glaze contained alkalies or not, both at 1,000 and 1,060 deg. The lime was, however, fairly high in the glazes cited, so a further series of tests was made to investigate this aspect. The results made it evident that the analogy between lead and calcium, which was to be inferred from the earlier experiments, was really false, since it appeared that any excess of lime above ·2 CaO might be replaced by PbO without much modification of the tint, yet below ·2 CaO any further replacement resulted in a proportional weakening of the colour, until, from a glaze devoid of lime, only a very pale pink was obtained. Calcium oxide was, therefore, a powerful factor in the production of the chromium red glaze.

The discovery that the chrome-tin-pink stain was destroyed by glazes free from lime and restored if only ·1 equivalent of this oxide was present, required further investigation. A crimson could not be obtained from any of the lime-free glazes, and their faint pink colouring was probably due to the small quantity of CaO, which was an impurity in the raw materials, or to the CaO in the stain. That the latter source contributed to the tint was proved by the much weaker pink colour obtained from a chrome-tin stain not containing lime. Microscopic examination showed that in these glazes, and doubtless in all crimson glazes, it was only the insoluble particles in suspension in the glaze which were pink. Most of these were dissolved at higher temperatures (e.g., 1,100 deg.), and a still paler tint was obtained. The subject of the solvent power of such glazes would be reserved for discussion at a future time.

Another table was produced, the salient feature of which was that it proved that lime was essential to the formation of the crimson glaze, and when this oxide was absent the colour was entirely destroyed. The production of the chromium-red glaze was a direct function of the content of calcium.

The influence of lead oxide was next dealt with. If white lead was added to a crimson glaze, the tint would become less blue and more inclined to brown until a certain proportion of lead was reached (depending on the composition of the original glaze), when the colour would be partly dissolved and a chrome-green glass containing pink aggregations would be obtained. Lead improved the tint, perhaps by dissolving chromium from the stain, forming a yellow glass, but beyond a certain limit it decomposed the chrome-tin-lime colour. As would be expected. the increase of lead in a lime-free glaze did not alter the "dirty" green tint. The persistenee of pink round the edges of the trial tiles pointed to the solution of lime, alumina and silica from the body.

The effect of silica was next discussed. The earlier tests had shown that an increase of silica generally made the tint more lilac, i.e., it departed from the true red shade. The results of further increases were remarkable. The addition of flint in the absence of lime prevented the dissolution of the crimson stain as long as a bright glaze was formed. Furthermore, if the glaze was rendered too "acid" the pink colour tended to become green. A further table showed that even in the presence of lime high boric acid would destroy the crimson colour, and that an addition of silica up to 3·5 equivalents would, under these conditions, preserve the tint of the glaze.

In order to study the action of alumina, two further series of trials were made, (1) containing lime, and (2) with lead oxide and soda as the bases. In two pairs of the tests the sum of the equivalents of alumina and boric anhydride was the same, and from the results described one could discover if there was any similarity in the action of these sesquioxides. Despite the solvent action of boric acid on stannic oxide, alumina appeared to have the more powerful influence on the colour.

The next table produced showed that it was possible, by the addition of alumina, to obtain a crimson (though of poor quality) when the glaze did not contain lime. Alumina and silica reduced the solvent power of the glaze, and, in consequence, the red stain particles were suspended in the viscid glass without suffering material change. Increments of alumina, beyond the amount that would be expected to dissolve in the molten glaze, converted the pink colour to green. Under these conditions alumina appeared to act as an acid. Additional tests, made in order to prove that there was no reaction between the alumina and silica, and the chrome-tin powder, served the purpose of showing that it was evident that alumina and silica per se did not encourage the pink colour, and were, in fact, without effect in the absence of lime in both stain and glaze.

While it had been remarked by others that boric acid imparted a lilac tint to the crimson glaze, the essayist had not found the remarkable fact recorded that the total omission of this flux had a precisely similar influence on the tint. Experiments appeared to show that for the glaze combination given, the best proportion of boric acid was ·26 equivalents, and that comparatively slight increase or decrease detracted from the tint. The reason for this appeared to be that in the absence of alkalies the "fluidity" and transparency of the glaze depended on B_2O_3. It was evident that the influence of boric acid on the tint was small, and its rôle in the absence of alumina was to prevent devitrification and to augment fusibility and refractiveness, which it could accomplish as efficiently as the alkaline oxides without disturbing the purity of the glaze colour to the same extent. Silica had a greater effect on the tint than boric oxide.

Dealing with the effect of zinc oxide, the essayist showed that in certain fritted glazes for which he gave the formulæ, zinc oxide might replace lead oxide up to ·15 equivalents, and its action on the colour up to that point resembled that of PbO. But a definite limit of substitution could not be stated, since the lower the temperature of fusion the greater the proportion of zinc oxide allowable. None of the glazes containing zinc exhibited any "scumming," and the surface was visibly brighter, though even in small amounts zinc oxide diminished the transparency of the glaze, hence the tint appeared more lilac.

Barium oxide, even in small amounts, disturbed the stability of a crimson glaze, and produced a surface segregation or scum. In the absence of lead the effect of barium was more apparent and severe. Where lime was absent no trace of pink was found. He had tried many combinations of lead, zinc and barium without obtaining a pink glaze.

Replacing strontia for baryta, results showed that strontium produced a brighter and more fusible glaze than barium, but its destructive action on the crimson colour was more rapid and effective. As little as ·05 equivalent SrO was sufficient to disturb the purity of the red colour, and the effect was directly proportional to the time and temperature of firing, i.e., the longer the glaze was in a state of fusion the greater was the destruction of the crimson colour. The latter observation was of

general significance concerning the production of chromium-red glazes, and for this reason it was the practice to fire and cool the kilns as rapidly as possible.

Magnesium oxide was shown to have a powerful destructive action on the chrome-tin-pink, and the presence of only ·05 of it was fatal. Of all the basic oxides used in glazes, magnesia exerted the most detrimental effect on the crimson colour. Therefore, it was advisable to ascertain by chemical analysis that materials such as whiting and clay did not contain more than a trace of magnesia.

Tests made with bismuth oxide, introduced in the form of bismuth subnitrate, showed that bismuth decidedly improved the colour, owing apparently to the greater diffusion of the chrome-tin-lime stain in the glaze. If, however, more than ·1 equivalent were added, the glaze attacked the pink colour with results detrimental to the tint.

Phosphoric acid was shown to destroy the crimson colour, and it might be assumed that any phosphates were detrimental. At cone 02 the effect was greater, and the tints much lighter.

Titanic acid, in its impure form, contained oxide of iron, and was known as rutile. It imparted a lilac tint to a red glaze when in small quantities, and a brownish or salmon pink if in large amounts. Titanium did not form a pink substance with chromium, and merely augmented the opacity of the glaze, while if in sufficient quantities, its own brown tint would modify the colour of the crimson glaze.

If white antimonious oxide were added to the crimson glaze, the tint was destroyed and a pale green glaze obtained. A very small amount of it was sufficient. If the antimony were fritted with the remainder of the glaze (excluding the chrome-tin stain), its action was rendered more complete. When added to the crimson glaze arsenious oxide in amounts up to 5 per cent. had no serious effect on the colour.

Other important aspects of the subject were dealt with by the essayist under the headings "The Relation between Colour and Composition," and "The Solubility of the Chrome-tin-lime Stain in Glazes," and the main results of the foregoing experiments were tersely summarised in the concluding portion of the paper. In the latter the various oxides were arranged into two classes, according to their influence on the crimson glaze at cone 05, and in the order of the apparent degree of their effect on the colour, beginning with the greatest. The arrangement was as follows :—

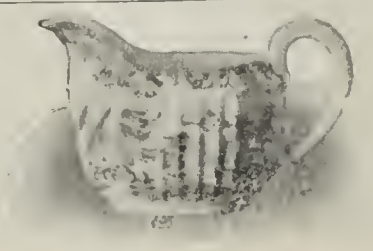
Favourable : Lime, bismuth oxide, lead oxide, boric acid, silica, soda, potash and alumina.

Injurious : Antimony oxide, magnesia, phosphoric acid, strontia, zinc oxide, baryta and alumina.

In conclusion, the author expressed his thanks to the directors of Candy & Co., Ltd., for enabling him to give these results of experiments made at their works.

Crockery is mentioned in the latest British Consular Report from Pemba among the articles for which there is a good local demand.

The Crockery Import of Harrar, Abyssinia, supplied by the United Kingdom and Germany, was valued during the year 1912-13 at 3,000 dollars.



STUDIES ON LEADLESS GLAZES.

(SPECIALLY TRANSLATED.)

THE glazes furnished by the following recipes, writes V. Tafner, in "Sprechsaal," though leadless, are readily fusible, can be fired in the ordinary earthenware kiln, and are sufficiently acid proof to be suitable for ordinary ware. Being cheap and easily prepared, they afford a means of dispensing with lead in the earthenware industry ; and several of them are sufficiently hard, lustrous and of a fine colour to compete with high-class lead glazes and be suitable for art ware.

In all cases sodium bicarbonate was used in making the glazes, ordinary soda varying too much in water content to be suitable for accurate working. For working on the large scale, enamel soda in equivalent quantities could be used instead of the bicarbonate. The cryolite employed was of Greenland origin, and all the other materials were of best commercial quality. The reducing flame of the Barthel petroleum burner was used for fusing the glazes ; and the samples fired on clay or metal were placed in direct contact with the flame.

The glazes are divided into three groups, according to their composition and properties.

GROUP I.—These glazes are on a par with the ordinary lead glazes used for common earthenware, the chief point about them being that they can be fired in the poorest kind of kiln, though if desired for glazing better class ware their fusing point can be increased by the addition of alumina and silica. Whilst not intended to be proof against the action of acid, they are no worse in this respect than common glazes and at the same time have the advantage of being non-poisonous even if dissolved by acid foodstuffs. The group comprises two glazes, differing only in their percentage content of alkali.

Glaze No. 1 is prepared by fusing the following ingredients :—

Bicarbonate of soda	8·80	parts by weight.
Calcined borax	15·10	,, ,,
Carbonate of potash	5·60	,, ,,
Carbonate of lime	1·60	,, ,,
Zinc oxide	2·16	,, ,,
Alumina	2·50	,, ,,
Boric acid	3·25	,, ,,
Silica.....	16·00	,, ,,

The product is a clear, transparent glaze, which has a greenish tinge when viewed in thick layers. The fusing point is very low—between Seger cone 020 and 019. Its property of resisting acetic acid can be improved, and the fusing point raised at the same time, by adding silica, or clay and silica, at the time of grinding, the composition of the addition depending on that of the earthenware body. The proportion of addition may be as high as 80 per cent.

Glaze No. 2 contains the same ingredients as No. 1, but the proportion of alkali is lower :—

Carbonate of potash	5·60	parts.
Calcined borax	15·10	,,
Carbonate of lime	1·60	,,
Zinc oxide	2·16	,,
Alumina	2·50	,,
Boric acid	3·25	,,
Silica.....	16·00	,,

This is slightly more refractory than the other (SC 018-016), but is more sightly, and will stand acid better. Pure silica forms the best addition in grinding.

When fused, both glazes are very fluid, adhering well to different kinds of clay and giving a smooth coating with a cold gloss, but crazed, this being more noticeable with No. 1. They also combine well with the usual pigments,

oxides and underglaze colours. They are well adapted for common ware that is not required to have any high power of resisting acids, and can be applied to finer ware on the content of silica being increased.

Group II.—This group also really contains only two glazes, both of which are highly interesting from the chemical and practical point of view. Glaze No. 3, which is typical of the group, has only potassium and sodium as the positive radicles, with, on the other hand, a relatively high content of alumina. The stage of acidity is comparatively low, but can be increased considerably without greatly raising the fusing point. The formula for this glaze, which melts at the temperature of SC 015, is : 0·05 K_2O, 0·95 NaO, 0·51 Al_2O_3, 1·19 SiO_2, 0·56 B_2O_3, 0·34 F. The fusing point is relatively high, and the acid-resisting properties correspond. By increasing the silica content to 3·60 equivalents, the fusing point is raised to SC 013-012, and the resistance to acid is almost complete ; and with 3·60 equivalents of silica, the fusing point is probably SC 011-010.

Glaze No. 4 is lower in alkalis, the formula being : 0·092 K_2O, 0·908 Na_2O, 0·467 Al_2O_3, 2·41 SiO_2, 1·02 B_2O_3, 0·29 F. The fusing point is SC 015-014, and the resistance to acid good. Increasing the silica content to 4·6 equivalents only raises the fusing point to SC 013-012, but makes the glaze quite acid proof.

The close connection between the ready fusibility of these glazes and the absence of the divalent bases is shown by the fact that the addition of only 4 parts of carbonate of lime to 1,000 of glaze No. 4 raises the fusing point above SC 010, without, however, improving the resistance to acid. Their great darkness and elasticity is closely connected with the high silica content. In the case of glaze No. 6 (see below), the hardness is on a par with that of fused quartz glass of best quality.

These glazes are translucent, owing to their cryolite content, and can only become transparent in extraordinary circumstances. The addition of a small percentage of tin oxide renders them opaque and imparts covering power, which is an advantage now that tin is so high in price.

The mixture for glaze No. 3 consists of :—

Carbonate of potash	7·59 parts.
Cryolite	20·00 ,,
Calcined borax	24·00 ,,
Silica.....	49·50 ,,

The fused glaze is water-white, transparent, and very fluid. The drops quenched in water are sometimes opalescent, or also transparent; but the slowly cooled mass is milk-white with a bluish tinge, or sometimes more or less yellow, the colour depending on the temperature employed for melting, SC 014 giving a good white, but higher temperatures a yellow coloration, which, however, disappears on more strongly heating. These differences also appear when chemically pure materials are used ; and are still more noticeable in other leadless glazes. The glaze combines well with the usual pigments and oxides, and enables very fine colour effects to be produced. Its resistance to acid is imperfect, boiling with 4 per cent. acetic acid for half an hour dulling the surface and producing local corrosion. The coloured glazes are better in this respect, the parts coloured with cobalt or copper being unattacked by the test in question.

When glaze No. 3 is treated solely as a fritt and receives an addition of silica in grinding, glazes of considerable practical interest are obtained. For instance, the addition of 20 parts of silica to 80 of No. 3 gives a glaze (No. 5) which fuses at SC 014-013, and is superior to No. 3 in transparency, hardness, and resistance to acid, being in this latter respect perfectly suitable for use on earthenware cooking utensils of good quality.

Increasing the addition of silica to 33·3 per cent. gives a glaze (No. 6) corresponding to the formula : 0·05 K_2O, 0·95 Na_2O, 0·376 Al_2O_3, 2·28 SiO_2, 0·56 B_2O_3, 0·34 F. This glaze is translucent, fuses at SC 013-012, and is completely acid proof even in the uncoloured condition. The hardness is very considerable, a knife having no effect, and even a good steel file will not scratch it more than the same would fused quartz glass.

Glaze No. 7, with the formula : 0·05 K_2O, 0·95 Na_2O, 0·376 Al_2O_3, 3·60 SiO_2, 0·56 B_2O_3, 0·34 F, is prepared by fusing glaze No. 3 with an equal quantity of silica. It is almost transparent, fuses at SC 010-09, completely acid proof and very hard and elastic. To diminish the tendency of this otherwise good glaze to craze part of the silica may be replaced by an equivalent quantity of boric acid.

Glaze No. 4 is prepared from the following ingredients :

Carbonate of potash	7·59 parts.
Cryolite	9·34 ,,
Calcined borax	24·60 ,,
Silica.....	49·50 ,,

The glaze is transparent, but becomes merely translucent after firing and slow cooling. The fusing point (SC 014) is only slightly higher than glaze No. 3, but the test with briling acetic acid produces no visible corrosion. The glaze combines well with the different pigments, and oxides, and forms a perfect coating in every respect. Its resistance to acid may be increased by the addition of silica in grinding, perfection in this respect being attained with 33·3 per cent. of silica to 66·7 per cent. of glaze. The product (glaze No. 8) fuses at SC 012, is fairly hard, elastic and almost transparent. The formula for this glaze is : 0·092 K_2O, 0·908 Na_2O, 0·467 Al_2O_3, 4·60 SiO_2, 1·02 B_2O_3, 0·29 F.

The glazes of this group have a wide sphere of application, which is impaired solely by their lack of perfect transparency. Glaze No. 3 can be used in all cases where a low fusing point is desirable and no special stress is laid on resistance to acid, e.g., stove tiles and utensils not used for boiling. Where increased resistance to acid is required, e.g., for cooking utensils, glazes Nos. 5 and 4 can be recommended. Nos. 6, 7 and 9 need a higher firing temperature, but are very hard, elastic, and acid proof, on account of which properties they can be recommended for the best ware, such as dinner plates, and tiles for outside decoration on buildings, where softer glazes would be easily scratched and dulled by the action of atmospheric dust.

Group III.—The scientific interest of this group is confined to the peculiar colour of the glazes. The general composition corresponds to the formula 0·35 Na_2O, 0·44 K_2O, 0·25 CaO, 0·45 Al_2O_3, 3·88 SiO_2, 0·41 B_2O_3, and the fusing point is SC 013–012. The resistance to acid is excellent, and the silica content can be increased considerably without raising the fusing point very much.

As regards the colour, glaze No. 9, though made of colourless or white materials, is golden yellow, even when chemically pure materials are used. This yellow affects the colour of added pigments, cobalt oxide for instance, giving a greenish tone, which becomes greenish blue when the cobalt is present in large quantity. The addition of 1·5 per cent. of zinc oxide, however, renders the glaze so far colourless as to have no influence on the colours of added pigments. The ingredients used for glaze No. 9 are :—

Carbonate of potash	32·80 parts.
Bicarbonate of soda	30·00 ,,
Calcined borax	16·28 ,,
Carbonate of lime	10·00 ,,
Alumina	16·50 ,,
Silica.....	64·00 ,,

The melt is rather viscid, transparent, and intensely golden yellow. Its power of refracting light is so great that

the surface of the glazed ware is as smooth and glossy as that of the best lead glazes. The firing temperature is SC 013–012, and the fired glaze is perfectly acid proof.

Glaze 10 is No. 9 decolorised by 1·5 per cent. of zinc oxide, but is still a faint yellow when viewed in thick layers, and is not quite so resistant to acid, though in other respects it behaves like the original glaze. The addition of 33·3 per cent. of silica in grinding, however, removes this defect, whilst raising the fusing point to SC 010.

Decoloration can also be effected by adding cryolite, 10 per cent. of which to 80 per cent. of glaze No. 9 giving glaze No. 10, whilst 20 per cent. gives glaze No. 11, both of which are almost colourless, highly resistant to acid, and fuse at SC 013. It is noteworthy that when the cryolite is used, in equivalent proportions, to replace the bicarbonate of soda or the alumina, the original golden yellow colour of the glaze is retained.

The following variants of glaze No. 9 are all very good, acid proof, and in every way satisfactory. Glaze No. 12 is prepared from :—

Carbonate of potash	32·80	parts.
Bicarbonate of soda	30·00	,,
Calcined borax	16·28	,,
Carbonate of barium	9·85	,,
Carbonate of lime	5·00	,,
Alumina	16·50	,,
Silica	64·00	,,

Glaze No. 13 :—

Carbonate of potash	32·80	parts.
Bicarbonate of soda	30·00	,,
Calcined borax	16·28	,,
Carbonate of lime	10·00	,,
Carbonate of barium	18·00	,,
Alumina	10·00	,,
Silica	64·00	,,

In No. 12, one half of the carbonate of lime has been replaced by the equivalent quantity of the corresponding barium salt, and in No. 13 a portion of the alumina has been replaced in the same way.

Glaze No. 14 :—

Carbonate of potash	32·80	parts.
Cryolite	16·50	,,
Calcined borax	16·28	,,
Carbonate of lime	10·00	,,
Carbonate of barium	18·80	,,
Alumina	0·75	,,
Silica	64·00	,,

In this case the whole of the bicarbonate of soda and a portion of the alumina have been replaced by equivalent quantities of cryolite and the carbonate of barium is retained in place of alumina.

Glaze No. 15 :—

Carbonate of potash	32·80	parts.
Cryolite	16·50	,,
Calcined borax	16·28	,,
Carbonate of lime	10·00	,,
Alumina	16·50	,,
Silica	64·00	,,

The carbonate of barium is omitted and cryolite used to replace the bicarbonate of soda alone, so that the finished glaze is rather higher in alumina.

Glazes 12–15 are very similar to No. 9 in all their properties, being more or less of an intense golden yellow colour, fusing at SC 013–010, and giving a very glossy, acid-proof coating.

This group contains still another glaze (No. 16), which differs from Nos. 9 and 10 in containing barium. It is prepared by first melting a fritt of :—

Carbonate of potash	32·00	parts.
Bicarbonate of soda	30·00	,,
Calcined borax	16·28	parts.
Carbonate of lime	10·00	,,
Zinc oxide	2·00	,,
Alumina	16·50	,,
Boric acid	30·00	,,
Silica	64·00	,,

and then adding to each 100 parts of this fritt, when grinding, 30 parts of carbonate of barium and 30 of silica.

The appearance of this glaze is hardly distinguishable from that of the lead glazes. It gives a very glossy surface, is almost colourless, combines well with pigments, oxides, and underglaze colours, and offers a high resistance to acid. The fusing point is SC 012.

These glazes have a very extensive sphere of application, for though their fusing point is rather high for common ware, their appearance renders them very suitable for better goods. Nos. 6 and 10 are perhaps of the most general applicability, since they combine within themselves all the properties necessary to enable them to compete with the best lead glazes.

Reviews.

Staffordshire Pottery and its History. By Josiah C. Wedgwood, M.P., C.C., Hon. Sec. of the William Salt Archæological Society. London : Sampson Low, Marston & Co., Ltd. Price 10s. 6d. net.

Few districts without really ancient history—and the Potteries has none—have inspired so many historical works as the centre of the potting industry ; but few districts, if any, have the advantage of a trade so interesting and so romantic in its development. Mr. Wedgwood adds another volume to its numerous predecessors. The book is essentially historical as apart from technical ; it contributes nothing to our knowledge of the technique of the early potters, but two chapters do add valuably to the history of the industry. Mr. Wedgwood has made a search of the old Tunstall (including Burslem) Court Rolls with a view to discovering evidence of the origin of "potting," and his trouble has been well rewarded. The most important finds are the following :—

1348. William the Pottere gives 6d. for licence to make earthen pots (*facere ollas terreas*).
1353. Thomas the Throgher is amerced for a default at Chatterley.
1363. John Pottere is presented for an affray in Borewaslym (Burslem).
1369. Robert le Potter gives 12d. for licence to get earth for making pots until the following Michaelmas.
1372. Thomas le Thrower takes up land in Thursfield.
1405. Robert Potter is recently dead in Burslem.
1448. Richard Adams and William his brother are amerced for digging clay (argillium) in the common road between Sneyd and Burslem.

Mr. Wedgwood does not appear to attach to these discoveries, in his search for the origin of "potting," the significance they deserve. They do not prove that pottery fabrication as an organised industry was in existence in the fourteenth century, but they do prove that some individual potters were then making ware. The names clearly indicate potters and throwers, and these peasant folk are hardly likely to have paid for licences unless they had intended to make "earthen pots." There is, of course, good historical evidence that the butter-pot industry was established at Burslem early in the seventeenth century, and there is evidence from existing pieces that slip-decorated wares were being made in North Staffordshire in the middle of the seventeenth

century, but these gleanings from the Tunstall Court Rolls are the first proof that the craft of potting—isolated, limited in extent, and confined to a few individuals, no doubt—existed in the district in the fourteenth century.

The other chapter, which materially adds to the history of the industry, is "The Salt-Glaze Potters." In this the author quotes from a previously unpublished MS. of Josiah Wedgwood, which is preserved in the Etruria Museum. The document was drawn up by the great potter in 1765 as the result of his "having examined some of the oldest men in the pottery here . . . who knew personally the masters in the pottery, and very nearly the value of the goods they got up, fifty years before." The MS. gives the "Men necessary to make an oven of Black and Mottled, per week, and other expences" at the period of 1710-15, and it is so interesting that we quote it :—

	£	s.	d.
6 men, 3 at 4s. a week, and 3 at 6s. ..	1	10	0
4 boys at 1s. 3d.		5	0
1 cwt. 2 qrs. lead ore, at 8s.		12	0
Manganese		3	0
Clay, 2 cart-loads, at 2s.		4	0
Coals, 48 horse-loads, at 2d...		8	0
Carriage of do., at 1½d.		6	0
Rent of Works, at £5 per annum		2	0
Wear and tear of Ovens, Utensils, &c., at £10 per annum		4	0
Straw for packing, 3 thrave at 24 sheaves to the thrave, at 4d.		1	0
The master's profit, besides 6s. for his labour		10	0
	£4	5	0

Josiah Wedgwood estimated the annual value of trade at that time (1710-15) at £10,000, and in a letter to Lord Auckland in 1792 he proceeded to guess at the annual value of trade in that year, which he placed at between £200,000 and £300,000. But, says the author, "I cannot help thinking that his estimate was purposely on the low side, for the manufacturers of this date always lived in fear of special taxation." It is interesting to compare these figures with last year's export trade, which alone amounted to £3,151,586. The Wedgwood MS. also includes a list of "Pot-works in Burslem about the year 1710 to 1715," which even then numbered over forty, their weekly output being valued at £139 10s., or £6,417 for the year of 46 weeks. Seeing that the total trade of the district was then estimated at £10,000, the great majority of the works were obviously at Burslem ; indeed, a list of the Hanley pot-banks, also included in the MS., only numbered seven, while at Stoke there were only two.

The date and manner of the introduction of salt-glazing into Staffordshire has always been a moot point. Mr. Wedgwood does not decide it, but he advances evidence that the Elers did conduct the operation of salt-glazing. Some years ago some earthenware pipes were found on the site of the Elers works at Bradwell Wood, which confirmed the story that the Dutchmen, for the purpose of maintaining secrecy, made use of speaking tubes. One of these, Mr. Wedgwood mentions, is glazed with salt. This fact is not new, though it is included in a book on pottery for the first time. The interesting discovery, in fact, was pointed out by the late Mr. L. H. Jahn (Curator of the Hanley Museum) to the writer of this review some years ago, when the pipes were first on exhibition at the Hanley Museum.

Mr. Wedgwood is quite unbiassed and frank in his estimate of his great-great-grandfather, as the following interesting excerpt shows :—

> A great number of the letters of Josiah Wedgwood have survived, and they show the chief cause of his success to have been his restless passion for experiment and novelty, coupled with an almost American love of the extension of business—particularly profitable business. He was first a skilful potter, secondly a pushing man of business, and only thirdly, perhaps, a great artist. When he broke with his stick some imperfect vase, saying, "That won't do for Josiah Wedgwood," it was not because the delinquent vase offended his taste, but because it might damage his reputation and the sale of his wares. He wanted perfection, and he got perfection ; but he wanted it to sell, as a business proposition. And when we find him wondering whether he can keep up the price of his common cream plates to four shillings a dozen, while the other potters have brought their price for the same plates down to two shillings a dozen, then we catch a glimpse of how well it paid.

Beyond the points we have referred to, the book does not contain much that is new, but it does gather together and co-ordinate what has been said by many writers. The author has endeavoured to show how a home or peasant industry developed into a factory industry through the necessary specialisation of departments, how the small owner of a one-oven "bank" became a capitalist when developments necessitated several ovens, how machinery was introduced with its consequent strikes of workers, how trade unionism sprang up and pursued a checkered career with the accompaniment of serious disputes, and how means of transit changed from the packhorse to the railway and canal. He sketches the careers of famous and minor potters from the earliest times, concluding with a chapter on modern firms, which, however, is not as comprehensive as it might have been and includes some minor errors, such as the statement that "the manufacture of cheap 'jet' and 'rockingham' has become of recent years an important branch of manufacture at this Longton end." Obviously the ground covered is exceedingly wide—wider, indeed, than could be exhaustively treated within the limits of the volume. Mr. Wedgwood fully acknowledges sources of information, but occasionally later and better information than that quoted could have been obtained by personal investigation or reference to more recent publications.

Porcelain and Earthenware to the value of £192,300 were exported from Japan during the first four months of 1913. The value shows a notable increase.

U.S. Glass Sand Production.—The quantity and value of glass sand produced in the U.S.A. in 1912 was lower than in the two preceding years. The production amounted to 1,465,386 short tons, valued at $1,430,471, as compared with 1,538,666 short tons, valued at $1,543,733, in 1911, a net decrease in quantity of 73,280 short tons and in value of $113,262. The glass industry was progressive in 1912, for building operations throughout the country made a steady demand for window and plate glass. Many glass factories, however, were hindered in operation by a shortage of small help, and some plants had to lay off blowers because enough boys could not be procured. This labour difficulty made the output of glass less than it would have been under more favourable circumstances and may account in part at least for the decreased production of glass sand. The average value of glass sand per ton was a fraction of a cent over $0·96 in 1912 and slightly over $1·01 in 1911. It was slightly less than $1·04 in 1910 and than $1·05 in 1909.



EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR JULY, 1913.

		Quantities.				Value.			
		Month ended July.		Seven Months ended July.		Month ended July.		Seven Months ended July.	
China or Porcelain, Earthenware and Pottery:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	6,588	2,908	31,342	21,146	£7,358	£5,478	£38,822	£35,935
,, France	,,	5,714	6,665	45,320	54,385	7,415	11,290	47,788	67,980
,, United States of America	,,	24,263	19,320	149,999	155,517	37,828	31,417	215,825	236,630
,, Brazil	,,	26,105	30,048	218,100	238,068	17,981	21,931	119,839	179,088
,, Argentine Republic	,,	31,709	61,047	202,840	337,359	24,823	34,991	151,626	200,331
,, British South Africa	,,	11,440	11,482	63,466	89,987	9,426	11,131	64,497	82,272
British East Indies	,,	27,851	28,506	210,247	236,269	15,562	21,390	125,027	156,538
,, Australia	,,	14,058	18,103	138,323	167,075	17,410	24,938	166,129	189,756
,, New Zealand	,,	5,890	6,068	43,735	47,616	7,785	9,665	59,672	69,737
,, Canada	,,	69,482	51,060	272,197	364,078	49,078	49,696	229,480	303,935
,, Other Countries	,,	93,945	103,237	613,781	712,976	70,240	73,778	414,507	481,080
Made up as follows:									
Porcelain, Chinaware, and Parian	,,	1,626	1,787	8,606	10,880	14,807	16,896	78,030	106,501
Floor Tiles for Tesselated Pavement	,,	6,721	6,599	43,197	46,495	6,196	6,197	42,944	41,364
All other Tiles (except Roofing and Street Paving)	,,	13,825	15,837	81,255	105,734	14,197	17,441	76,828	109,661
Sanitary Ware	,,	31,175	33,378	192,787	234,171	44,228	52,857	270,589	342,900
Electrical Ware, Door Fittings, and Chemical Ware	,,	1,732	3,177	22,929	30,560	2,641	4,984	22,094	31,059
Other Earthenware (including Semi-Porcelain and Majolica)	,,	117,708	118,145	757,005	844,230	155,816	162,853	986,365	1,136,927
Jet, Rock'm, and Glazed Terra-cotta	,,	304	558	1,407	4,731	431	439	2,404	4,211
Red, Stone, Brown and Yellow Ware	,,	143,954	158,963	882,164	1,147,675	26,590	34,038	153,958	230,659
Glass.									
To British South Africa	value £	—	—	—	—	8,224	9,354	55,127	61,561
,, Other Countries	,,	—	—	—	—	131,634	140,558	913,693	1,010,702
Made up as follows:									
Plate Glass	cwts.	17,179	16,019	122,664	149,291	30,835	28,950	209,077	244,756
Flint Glass	,,	5,754	6,692	48,766	48,018	19,334	25,578	157,565	176,156
Glass Bottles	gross	79,261	76,748	554,933	561,292	49,837	47,514	338,823	347,871
Glass Manufactures, unenumerated	cwts.	52,663	59,340	361,983	379,106	39,852	47,870	263,355	303,480

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR JULY, 1913.

Porcelain, Chinaware, and Parian	cwts.	3,989	4,214	22,199	25,467	£18,622	£20,054	£110,848	£129,711
Floor Tiles for Tesselated Pavement	,,	2	—	260	949	17	—	301	729
All other Tiles (except Roofing and Street Paving)	,,	2,771	2,782	16,034	20,989	1,321	2,288	9,872	13,714
Sanitary Ware	,,	8	26	271	122	34	16	570	288
Electrical Ware, Door Fittings and Chemical Ware	,,	2,387	2,100	15,675	17,075	4,184	3,640	25,032	28,071
Other Earthenware (including Semi-Porcelain and Majolica)	,,	28,521	28,781	179,487	193,354	59,159	60,730	356,933	393,363
Jet, Rock'm, and Glazed Terra-cotta	,,	24	30	47	616	116	88	205	1,327
Red, Stone, Brown and Yellow Ware	,,	22,204	16,282	150,124	184,933	4,723	4,982	34,802	42,238
Window and German Sheet Glass	,,	101,076	102,790	725,089	711,268	60,094	60,604	415,541	404,000
Plate Glass	,,	27,067	45,218	187,397	294,079	34,434	54,682	234,362	354,147
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	,,	78,944	86,240	480,125	543,347	119,221	123,158	717,504	749,493
Glass Bottles	gross	133,519	155,589	983,789	1,138,768	55,953	64,874	422,510	475,874
Glass Manufactures, unenumerated	cwts.	1,525	269	11,702	1,663	1,334	189	9,973	3,160

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR JULY, 1913.

Porcelain, Chinaware, and Parian	cwts.	1,247	1,496	5,339	7,507	£6,856	£8,103	£29,392	£40,020
Of all Other Sorts	,,	299	476	5,125	7,887	1,040	1,469	6,692	15,673
Window and German Sheet Glass	,,	932	1,676	5,258	4,595	788	815	3,294	2,435
Plate Glass	,,	787	686	2,760	6,455	1,124	991	3,898	9,330
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	,,	1,005	967	7,355	8,780	2,421	3,786	19,187	27,284
Glass Bottles	gross	1,483	3,470	21,337	35,088	658	1,922	11,594	19,836
Glass Manufactures, unenumerated	cwts.	16	276	1,016	974	33	146	1,194	727

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from June 26, 1913, to July 26. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to July 26. Packages.	Corresponding Period, 1912. Packages.
Boston	335	500	4,402	3,788
New York	751	1,246	5,352	5,178
Baltimore	590	584	3,718	4,494
Philadelphia.....	118	238	1,431	1,899
New Orleans.....	144	43	861	508
Newport News...	—	3	35	51
San Francisco ...	83	76	751	763
Portland, Maine.	—	1	1,299	631
Galveston	90	120	194	339
Portland, Oregon	—	42	203	152
Inland Points ...	77	95	471	377
Total	2,188	2,948	18,717	18,180

Legal.

The Factory Act.—At Swadlincote on July 29, Benjamin Robinson, pottery manager, Church Gresley, was summoned under the Factory Act for failing to give notice of an accident which occurred at his works, and for employing without a medical certificate a youth under the age of 16 years. In the first case defendant was fined 16s. 6d. and costs, and in the second case 14s. 6d. and costs.

Neglectful Workmen.—At Burslem on July 29, Wm. Mountford was sued by Doulton & Co., Ltd., Burslem, for £2 damages for neglect of work from June 4 to July 1, and also for £2 9s. 4d. wages advanced by the firm and only partly covered by work still unfinished. Defendant, who is a sanitary caster, left work without notice, and at that time was indebted to the firm to the extent of £3 19s. 5d. The unfinished work was completed by other men, and defendant was entitled to £1 10s. 1d. which had been credited to him. Defendant's version was that when he gave a month's notice he was refused a week's wages, and he left in consequence. Defendant was ordered to pay the firm the sum claimed.——At the same Court, Furnivals, Ltd., earthenware manufacturers, Jobridge, claimed £1 4s. 3d. from Leonard Greatbach, and £4 1s. 2d. from G. Joyce, being wages advanced and only partly covered by work not completed. In each case the defendants left work without notice, and they were directed to pay the sums claimed.

Responsibility of Executors.—(From our Potteries Correspondent.)—Before the Potteries Stipendiary, Mr. B. C. Brough, at Longton, on Aug. 13, Mr. Alfred Bailey Jones and Mr. Thomas Poole, who were described as trading as Ratcliffe & Co., and carrying on a business of earthenware manufacturers in Church-street, Longton, were summoned for failing on March 1 to comply with Section 12 of the Workmen's Compensation Act by not sending to the Home Secretary a correct return, specifying the number of injuries in respect of which compensation had been paid by them during the previous year, and the amount of such compensation. Mr. G. C. Kent, for the defence, explained that the defendants had no personal interest in the case as they were simply executors under the will of the late Mr. Ratcliffe. Mr. Ross Pashley, on behalf of the Director of Public Prosecutions, said the Act provided that there should be sent on March 1 of each year a return showing the number of cases in which compensation had been paid and the amount of such compensation. The Home Office, although not obliged to do so, sent out forms to be filled up, and the defendants had their first form on Dec. 19, 1912. No notice was taken of that, and a second form was sent between March 8 and 12 of this year. On the second form a notice, printed in red, was placed. It was marked, "Important and urgent," and stated that failure to send it in rendered the responsible persons liable to a penalty of £5. On April 21 a letter was also sent, but still no notice was taken of it, and up to that moment the return had not been made. For the defence, Mr. Kent said the defendants were large manufacturers on their own account, and there was no suggestion that in their own business they had failed to carry out the law. In this case they were simply executors of the late Mr. Ratcliffe, and had no personal interest in the business, nor supervision over it. The conduct of the business was left to Mr. Vincent Ratcliffe, a son of the late Mr. Ratcliffe, who thought that because no accident had occurred it was not necessary to make the return. The return would be made immediately, and there would be no such failure in the future. Mr. Pashley said the absence of accident did not make the slightest difference, and that was pointed out on the form. A penalty of 40s. and costs was imposed.

A Book-Keeping Error.—In the City of London Court, on Aug. 26, before Judge Lumley Smith, K.C., a claim was made by Cama, Moolla & Co., 172, Palmerston House, Old Broad-street, E.C., to recover the sum of £2 18s. 4d. for two cases of glass supplied to the defendant, Mr. H. H. Bannister, Horncham Glass Stores, Bedford. Mr. Collyer, plaintiffs' solicitor, stated that the debt was incurred four years ago, but owing to a mistake of the plaintiffs' bookkeeper the balance was not brought down until lately, when the plaintiffs discovered the error. One of the plaintiffs' clerks was called, and said that the traveller who took the order had died in the meantime, but he had a note in the handwriting of the traveller showing that the order for the glass was given on Sept. 23, 1909. The chief goods clerk of the Midland Railway Co. at their goods department at Bedford deposed to the delivery of the goods on Oct. 4, 1909, when the signature of H. H. Bannister was given for them at the defendant's warehouse. Defendant told the Court that he had not had the goods, and that the signature on the railway sheet was not in his handwriting. He did not know whose writing it was. He only wished to pay his just demands, but as he never had the glass in question he refused to pay for it. The first intimation he had from the plaintiffs was, "We think you have overlooked it." That was not the way for a firm to behave after four years. He always paid for everything he had ever had of the plaintiffs. They did not give him a description of the goods, but simply said "to goods." Judge Lumley Smith said that four years was certainly a long time to elapse after the delivery of the goods. Mr. Collyer admitted that, but he had explained that it was the fault of the bookkeeper. The defendant wanted to know why the plaintiffs' representative who had called upon him since had not asked him for the money? Plaintiffs' representative said he did not know it was due. Judge Lumley Smith examined the plaintiffs' ledger, and said the amount appeared there all right, but it had not been carried down. Defendant said he was not used to that sort of business. He still believed he had not received the goods. He would not have come from Bedford if he thought he owed the money. He did not recognise the signature on the railway sheet, and he would write his signature so that the Court could compare it with the handwriting on the railway sheet. If the young lady assistant had signed the sheet she would have signed her name and not his. Mr. Collyer said the defendant wrote to the plaintiffs and said, "Please let me have particulars of goods, when ordered, and when delivered." That had been sent. Judge Lumley Smith thought the defendant had had the glass, and that the plaintiffs were entitled to their judgment. The goods were signed

for, and he had no doubt they had been delivered. While he would give judgment for the plaintiffs he did not think it was a case for costs. They had overlooked the matter for so many years. The defendant had come up from Bedford. Mr. Collyer said the plaintiffs would be robbed of the fruits of their judgment if they were not to receive the costs. They had brought one of the railway company's representatives from Bedford. The defendant added that he did not know why the action was brought in London at all. Judge Lumley Smith pointed out that the plaintiffs carried on business in London. The defendant said the traveller took the order in Bedford and the business was transacted in Bedford. Judge Lumley Smith: That does not matter; there will be no costs.

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

STRAW AND PACKING CHARGES.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I am glad to see that the China and Glass Dealers' Association are taking up the matter of excessive charges for package, crates, and straw in the Potteries. We have now been in the trade more than 50 years. Formerly crates were allowed two-thirds when returned in good condition, and moderate charges were made. Now, only half-price is allowed, and very excessive charges are made. Evidently some profit is netted by the manufacturers where retailers are foolish enough to pay full price. This week we had an old cask containing nothing but an eight-piece toilet set charged 6s. as new cask and straw. The cask was not worth 1s., and the straw 6d. It had seen several journeys, and if each journey 3s. was made by the manufacturers, we should think they could dispense with the profit on the goods. Retailers would do well to refuse payment, and let the matter go into court.—Yours, &c.,

Northampton, Aug. 25. W. T. CHURCH.

BREAKAGE OF FOREIGN GLASS.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I should be very pleased if you would inform me what is the custom and the law with regard to foreign glass.

I bought a quantity of tumblers, free delivery. There came to hand two cases of one pattern, of which one-fourth were broken, of another pattern one-fifth were broken, and of a third pattern one-sixth of contents of case were broken. I did not claim upon the railway company because I knew they would not admit any responsibility, and the agent I bought from would make no allowance. I should therefore be pleased if you would inform me if I can make any claim upon anyone except the consumer.

This year fully one-fourth of our Continental glass ware has arrived broken, and this makes a serious increase in the cost of the goods. Dock workers and railway men clamour for more pay: the one condition on which I should grant it would be more efficient service.—Yours, &c.,

Aug. 20. A SUFFERER.

[Perhaps some of our readers who have dealt with a similar case would be able to advise the writer of the above letter.—EDS. P. G.]

ANSWERS TO CORRESPONDENTS.

M. L.—"Potters' Lead Ore" would probably be galena or lead sulphide, which is produced extensively in Derbyshire and other parts of the United Kingdom.

B. S.—You ask to be informed possible maker of toilet-ware, Reg. No. 4,339,498. This request we are absolutely unable to comply with. The number of registered designs that have been brought out during the past thirty years, up to date, amount to less than 650,000, so that on a similar average it will be 170 years hence before so great a number of designs as 4,339,498 will have been registered at the Patent Office Designs Branch.

C. H. E.—The maker of dinnerware with trade-mark W. B. in a Staffordshire knot was William Brownfield (1850 to 1871) afterwards William Brownfield & Sons, potters, Cobridge, Staffordshire. On pages 168 and 170 of our 1903 DIARY we give a list of the purchasers of this firm's patterns. They discontinued business about 1901. The figures you give refer to colour of decoration only, and are of no help to us in ascertaining present holder of design, but if any name of pattern should appear on any pieces of the ware let us know, and we will see if we can assist you further.

Inquiries Answered Through the Post for:—Slipper Bed Pans; Glass Cells for Electric Battery; Ware marked with a crown over monogram T.T.C. (given in P.G. DIARY); glass lining registered design No. 83,782; cheap 5-piece w. & g. toilet sets with small basins.

Trade Notes.

The Editors are always glad to receive items of trade intelligence such as removals, new premises, personal it ms, &c.; also marked local newspapers.

Mortlocks, Ltd., Oxford-street and Orchard-street, London, W., have been appointed by Royal Warrant china and glass merchants to Her Majesty the Queen.

"The Pottery Gazette" Diary and Trade Directory for 1914 will finally close for press on Sept. 16. All matters relating to this publication should be sent to the publishers as soon as possible.

Fire.—On Aug. 2 a fire occurred at the glass works of Councillor F. Hampson, Duncan-street, Salford. The outbreak originated in the store-room, a portion of the contents of which was destroyed.

Mr. Alexander Carr, china and glass dealer, of Dundee, has just returned from a long journey through the United States and Canada. We are pleased to learn that Mr. Carr has derived much benefit to his health from this trip.

The death took place at Belle Vue, Oxford-terrace, St. Marychurch, Torquay, on Aug. 1 of Mr. Wm. John Skinner, director of the Royal Longpark Pottery Co., Ltd. Deceased, who was 53 years of age, was also associated with the Aller Vale and Watcombe Potteries.

British Clay Exports for the month of July were as follows:—China clay, 65,931 tons (£76,333); fireclay, 3,404 tons (£3,154); other sorts, 8,283 tons (£6,138). Exports for the corresponding month of 1912 were:—China clay, 53,215 tons (£60,960); fireclay, 5,239 tons (£3,963); other sorts, 11,045 tons (£8,836).

Presentations.—On the occasion of his marriage on Aug. 4 to Miss A. E. Harrison, of Guildford, Mr. Arthur Mould, son of Mr. Stephen Mould, was presented by the employees of Mould, Ltd., glass and china dealers, Leatherhead, Cobham, and Ashtead, with a fire screen and tea set. ——On the occasion of his marriage on Aug. 5, to Miss F. Lowe, Mr. Ernest Edward Ratcliff, manager for the Meas-

ham Coronet Terra Cotta Works, was presented by the directors with a clock. He received a similar gift from the employees.

The Shops Act.—Surrey County Council have made an order for glass and china dealers at Leatherhead to close each Wednesday at 1 p.m.——At Torrington (Devon), Thursday has been fixed as the early closing day, and at Nelson (Lancs.), Tuesday.——The Essex County Council on Aug. 11 issued an order for china and earthenware dealers at Wethersfield and Ridgewell to close each Wednesday throughout the year at 1 o'clock.——Staffs County Council have made orders for Thursday closing by glass and china dealers at Pelsall and Willenhall.

City and Guilds of London Institute.—The programme of the Department of Technology for the session 1913-14 has just been published (price 9d., J. Murray, London). No alteration has been made in any syllabus in which our readers are interested. The dates fixed for examinations are :—Pottery and Porcelain : Grade I.: Monday, April 27, 7.0 to 10.0 p.m. : Pottery and Porcelain :—Grade II. and Final : Wednesday, April 29, 7 to 10 p.m. : Glass Manufacture :—Grade I. : Monday, April 27, 7 to 10 p.m. ; Glass Manufacture : —Grade II. and Final : Wednesday, April 29, 7 to 10 p.m.

Wills and Estates.—The estate of Mr. Laurence Wedgwood, chairman of Josiah Wedgwood & Sons, Ltd., of Etruria, has been valued at £21,512, with net personalty, £11,546.——Mr. Roderick Allison Rigg, glass and china merchant, who resided at Lindholme, 46, St. Andrews'-drive, Pollokshields, Glasgow, left estate to the value of £30,507 18s. 7d.——Estate of the gross value of £28,202 12s. 6d., with £3,054 10s. 11d. net personalty, was left by the late Mr. Wm. Slater, Vernon-street, Derby, head of the firm of W. H. & J. Slater, tile and pipe makers, Vernon-street, Derby. He directed that the business, if they desire, shall be carried on by his sons, who shall take it over at a valuation, with nothing for goodwill. The estate is left to his family.——The estate of the late Mr. Harry Dudson, earthenware manufacturer, Alsagar, Cheshire, has been proved at £5,919 gross, with net personalty amounting to £5,861.

The Dennis Holiday Club.—For the fourth year in succession a distribution of the funds of the Dennis Holiday Club —amounting this year with the bonus added by the firm to close on £700—has enabled practically the whole of the employees at the Dennis Glass Works, Stourbridge, to spend a clear week's holiday with their families, either at the seaside or in the country, the works being closed meanwhile. This arrangement has been highly beneficial to the workpeople, and in no way detrimental to the business of the firm. The closing of works for a week is a much more common occurrence in the north than it is in the Midlands, and it is made possible by the systematic weekly collection of funds from all the workers. Mr. Conreve Jackson, the managing director of the company, will be only too pleased to impart the results of his experience in this respect to other manufacturers who may feel inclined to adopt a similar scheme.

Bankruptcy Statistics.—The annual report of the Inspector-General in Bankruptcy for the year 1912 was published on Aug. 25. There were 6,351 cases of bankruptcy and deeds of arrangement in England and Wales last year, and the liabilities, as estimated by debtors, was £8,053,940, estimated assets £3,481,663, and the estimated loss to creditors £6,452,171. As compared with 1911, there were decreases as follows :—In cases, 341 : estimated liabilities, £2,793,656 : estimated assets, £782,794 ; estimated loss, £2,418,316. The failures in Scotland numbered 316, with liabilities £614,667 and assets £151,097. The Irish insolvencies were :—Bankruptcies : 128 cases, £222,912 liabilities, and £41,326 assets. Deeds of arrangement : 66 cases, £86,810 liabilities, £19,666 assets. Arrangements under the control of the Court : 178 cases, £89,489 liabilities, and £62,378 assets. In no trade or occupation were the aggregate liabilities over half-a-million pounds, the largest amount being in the case of builders, £476,270.

Lead Poisoning in the United Kingdom.—The total number of cases of lead poisoning reported to the Home Office under the Factory and Workshop Act during July, 1913, was 49, of which one was fatal. In addition there were 19 cases of lead poisoning (none of which was fatal) reported among house painters and plumbers. During the seven months ended July, 1913, the total number of cases of lead poisoning reported under the Factory and Workshop Act was 331, as compared with 332 in the corresponding period of 1912. The number of deaths was 14 in 1913, as compared with 31 in 1912. In addition there were 154 cases of lead poisoning (including 21 deaths) among house painters and plumbers in the first seven months of 1913, as compared with 138 cases (including 23 deaths) in the corresponding period of 1912. Of the 49 reported cases of lead poisoning in July last under the Factory and Workshop Act, there were 7 cases in connection with the china and earthenware trades, one of the persons affected being a female. During the seven months ended July 11, 1913, there were 43 reported cases, and 6 deaths in our industries as compared with 49 cases and 11 deaths during the corresponding period of 1912.

The National Flint Glassmakers' Society.—The members of the National Flint Glassmakers' Society of Great Britain and Ireland have re-elected Mr. John Husselbee as general secretary of the Society. Mr. Husselbee was first elected to the position in 1907, when he remained in office for three years. Since then he has had to seek election every twelve months, and has been successful each time. Messrs. G. Hedley, W. Bradford, jun., and S. Husselbee have been appointed as trustees. In a circular to the members, Mr. Husselbee states that from correspondence he had received it would appear that the executive note on the recent circular calling the attention of the trade to the serious increase in sick expenditure had created a mistaken impression amongst certain of the members who thought that the executive intended to move for the abolition of the sick section. All the executive purposed, and it was a duty, was to inform the members of the continually increasing expenditure since the benefits of the Insurance Act came into operation. For example, sick expenditure, Stourbridge district, January quarter, 1913, £14 : April quarter, £23 : present quarter (10 weeks only), £23 18s. That increase applied proportionally to nearly every district. The insurance sick expenditure had increased correspondingly. It amounted to £99 11s. 10d. for the first quarter, and from the returns up to date he estimated the expenditure, sick and maternity for the present quarter which terminated July 12, at about £130, which would exceed their previous grants from the Commissioners, thus necessitating him writing them for larger remittances.

The Electrical Treatment of Lead Poisoning.—A novel method of removing lead from the system of those who have contracted lead poisoning as the result of industrial occupation, or otherwise, has been the subject of recent experiment. The treatment is of a somewhat similar character to the now well-known high frequency treatment for the cure of rheumatism and similar diseases, which are due to deposits of foreign matter in the system, and not to bacterial action. It differs in that a direct current of quite low intensity is employed obtained from accumulators providing a current of from 25 to 40 milli amperes. The patient is placed with the feet in a bath of water, provided with a plate of aluminium, which is connected with the positive pole of this accumulator

The arms are immersed in a similar bath which forms the negative pole. On the current being passed the lead compounds present in the body are decomposed, and a process of electrolysis takes place, similar to that employed, for instance, in electro-plating, but in the reverse direction, so that the lead is dissolved and comes out of the system into the solution around the negative pole. To the uninitiated such a method of treatment may perhaps savour of the romantic, if not of the fantastic, but by all accounts experiments on animals conducted on a thoroughly practical basis have yielded some most remarkable results, and the method is now in course of being applied to the treatment of industrial lead poisoning in factories. It is said that the lead can be removed from the system in a very short time, and that obstinate cases of lead poisoning can be cured by regular applications of the treatment. The most valuable feature of the treatment is that it is extremely simple in operation, and has no unpleasant effect. In fact the workmen seem rather to enjoy it, and experience an actual increase of tone and vitality. It also seems to increase considerably the power of the system to resist further poisoning, and to eliminate any lead absorbed by natural means. Should these anticipations prove to be justified the wholesale adoption of this treatment in the industry would result in very considerable reduction of the risk of illness by lead poisoning.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette." and are strictly copyright.

Mr. Harry J. Elliott has opened a glass and china establishment at 17, Silver-street, Enfield (Middlesex).

Spence & Spence, 40 and 42, Charlotte-street, Leith, Edinburgh, ironmongers and general merchants, are opening a glass department.

Mr. L. Flatow has removed his office and showrooms to 2, Charterhouse-street, Holborn Circus, E.C., from 7, Arundel-street, Strand, W.C.

Mr. G. C. Hampsheir, manufacturers' agent, has commenced business on his own account at 12, Thavies Inn, E.C., and has secured several important agencies for useful and fancy china and art pottery. Mr. Hampsheir has now quite recovered from the breakdown in health which necessitated his taking a long rest from business.

CONTRACTS OPEN.

The Rochford (Essex) Guardians invite tenders by Sept. 2 for earthenware for six months. Tender forms can be had from the Clerk, Mr. F. Gregson, Southend-on-Sea.

Tenders are invited by Sept. 8 for a six months' supply of glass and earthenware to the Northumberland County Asylum at Morpeth. Tender forms from the Clerk and Steward at the Asylum.

Tenders are invited by the Cheshire County Council by Sept. 12 for china for the new annexe at Upton Asylum, Chester. Specification can be had from the Asylum Steward (returnable deposit of £1).

The West Ham Guardians invite tenders for the supply of earthenware for six or 12 months, from Oct. 1. Forms of tender can be obtained from the Clerk, Board Room, Union-road, Leytonstone, to whom they should be returned by Sept. 4.

Tenders are invited for earthenware and glass to be delivered as required to the East Sussex County Asylum, Hellingly, Sussex, for the Visiting Committee, for 12 months commencing Oct. 1. Forms of tender, &c., can be obtained from the steward at the Asylum, Hellingly. Sealed and endorsed tenders must be sent to Mr. R. Blaker, clerk to the Committee, by Sept. 19.

TENDERS ACCEPTED.

For the Northampton General Hospital :—Tye & Sons, Northampton, crockery.

For the West Ashford Guardians :—Mr. J. Giles, Bank-street, Ashford (Kent), white mugs (2 gross).

Government contracts let during July :—Post Office, porous pots, C. T. Maling & Sons, Newcastle-on-Tyne.

For the Metropolitan Asylums Board (recommended for acceptance) :—Adams & Co., Tunstall, Staffs., earthenware, five items to central stores (bulk supply), £130; Burtles, Tate & Co., Poland-street Glassworks, Manchester, glassware, three items to central stores (bulk supply), £70.

NEW COMPANIES, COMPANY REPORTS, &c.

Richards & Gillespie, Ltd.—Rd. No. 8,764.—This private company has been registered in Edinburgh with a capital of £1,000 in £1 shares. Objects: To manufacture and deal in stained glass and mosaic decorations, &c. Registered office, 3, Brandon-street, Motherwell.

Leigh Domestic Bazaar, Ltd.—Rd. No. 130,440.—This private company has been registered with a capital of £500 in £1 shares, the objects being to carry on the business of china and glass manufacturers, merchants, &c. Registered office : 81, Broadway, Leigh-on-Sea.

Diplocks, Ltd.—Rd. No. 130,728.—This private company has been registered with a capital of £5,000 in £1 shares (4,000 preference), the objects being to take over the business of a china and glass merchant carried on by S. Venner at Hove, as S. Diplock & Son. Registered office, 27, Western-road, Hove, Sussex.

Glasswares Syndicate, Ltd.—Rd. No. 130,595.—With a capital of £20,000 in £1 shares, this company has been registered with the object of carrying on the business of manufacturers of and dealers in glassware of all kinds, whether for lamps, bottles, or other articles, &c. Private company. Registered office : 56, Moorgate-st, E.C.

Premier Bottle Syndicate, Ltd.—Rd. No. 130,758.—This private company has been registered with a capital of £6,000 in £1 shares, with the object of carrying on the business of manufacturers of and dealers in glassware of all kinds, whether for lamps, bottles or other goods, &c. Registered office, 46a, Wilmer-gardens, Kingsland-road, N.

Globe Pottery Co., Ltd.—Rd. No. 130,596.—This company has been registered with a capital of £10,000 in £10 shares to carry on the business of earthenware manufacturers, &c. The subscribers are T. F. Wood, Clarcmont, Wolstanton, earthenware manufacturer, and five others. Private company. Registered office : Globe Pottery, Cobridge, Stoke-on-Trent.

J. A. Bradley, Ltd. (Rd. No. 130,637).—This private company has been registered, with a capital of £3,000 in £1 shares, to take over the business of a china and earthenware merchant, carried on by J. A. Bradley at 23, Market-st., Milnsbridge, near Huddersfield. The subscribers are J. A. Bradley, 6, Lindley-st., Longwood, and A. Roebuck, 47, Frederick-st., Crosland Moor, Huddersfield.

Manufacturers' Direct Distributors, Ltd.—Rd. No 130,503.—With a capital of £1,000 in £1 shares (250 preference), this company has been registered to take over the business carried on by Margaret J. Shorthouse at 97, Glebe-street, Penarth, and to carry on the business of wholesale and retail hardware merchants, dealers in china, glass, earthenware. Private company. Registered office : 97, Glebe-street, Penarth.

J. Blocksage & Co., Ltd.—Rd. No. 130,347.—With a capital of £1,000 in £1 shares, this company has been registered to take over the business of a brick and tile manufacturer, carried on by James Blocksage at Dukinfield and elsewhere. The subscribers are : H. Blocksage and Mrs. J. Blocksage, 292, Cheetham-hill-road, Dukin-

field, and T. Jones, The Croft, Leasowe-road, Wallasey, who are also first directors. Private company.

Permanent Enamel and Sandblast Co., Ltd.—Rd. No. 130,521.—Registered capital: £2,000 in £1 shares (500 preference). Objects: To carry on the business of manufacturers of and dealers in bottles, glass and chinaware, glass blowers, enamellers, and sandblasters, &c., and to adopt an agreement with G. H. P. Lambert. The subscribers are W. Hotton, 71, Southwark-street, S.E., and G. H. P. Lambert, 21, Chester-terrace, S.W., who are also first directors. Private company. Registered office: 71, Southwark-street, S.E.

James Marshall & Co., Ltd.—Rd. No. 130,298.—This company has been registered with a capital of £1,000 in £1 shares (666 "A" ordinary and 334 "B" ordinary), to acquire all the assets of the business of sole agents for the United Kingdom for the sale of china, porcelain, and other articles (if any) manufactured by Guerin & Co., of Limoges, and to adopt an agreement with H. W. Bull and J. Marshall. The subscribers are H. W. Bull, Burleigh House, Hampton-on-Thames, and J. Marshall, 2, Auckland-road, Upper Norwood, S.E. Private company. Registered office: 66, Hatton-garden, E.C.

British Glass Tiling & Marble Co., Ltd.—Rd. No. 130,727—Registered capital £50,000 in £1 shares. Objects: To carry on in the U.K. or elsewhere any business in connection with the manufacture, decoration or fixing of tiles and glass or other wall and ceiling coverings, &c. Contracts have been entered into with the British Decorative Glass Co, Ltd., the Associated Securities Corporation, Ltd., W. T. Williams, T. J. Lainjon and W. F. Williams. Purchase consideration £16,000 for (inter alia) the undertaking and goodwill of the British Decorative Glass Co., Ltd. Registered office, 2, Throgmorton-avenue, E.C.

Liens, Debentures, Satisfactions, &c.—Kent (James) Ltd., Longton.—Registered, £7,000 debentures; general charge.——Sowerby's Ellison Glass Works, Ltd., Gateshead.—Registered, £1,500 further charge with additional security, to R. H. Philipson, 1, St. James's-place, S.W., and another; charged on freehold hereditaments in East-street and Coulthards-lane, Gateshead, and an undivided share in hereditaments adjoining, also in East-street.

STUDENTS' NATIONAL COMPETITION EXHIBITION.

(BY A MEMBER OF OUR STAFF.)

AN exhibition of students' work for the session 1912-13 was held, under the auspices of the Royal College of Art, in the North Court of the Victoria and Albert Museum, Kensington, commencing on July 25 and remaining open during August. It was visited by a representative of "THE POTTERY GAZETTE," who reports:—"It was well worth the time spent. Many of the exhibits were distinctly creditable, the work looking more like that of past masters than students, especially some of the exhibits in rooms B. and C., on the ground floor, where no less than 157 original designs were to be inspected. These included suggestions for designs for tapestries, brocades, panellings, wall decorations, friezes, mosaics, &c. In room A., also, there were many practical ideas in designs for the various industries, and in addition the work of the craft classes was shown in special cases, two of which were utilised entirely for pottery, each piece of which bore the name of the exhibition student. In a room on the upper corridor there were some splendid examples of bust and group modelling, and in many respects, even from the point of view of the particular trades represented by THE POTTERY GAZETTE, there was much of interest to be seen. Those who are in any sort of doubt as to the efficiency of modern art instruction could not do better than pay a visit to such an exhibition as the one under notice, for the inspection, however short, could not fail to make a lasting impression."

Foreign Notes.

British China and Earthenware Goods are much in evidence in Pomerania, and apparently meet with a ready sale, according to the latest British Consular Report.

Salvador Customs Decisions.—Powdered glass, 1 centavo per kilog. gross; fireproof bricks and clay for making the same, free; glazed bricks (azulejos) or majolica bricks, free.

Hollow Glassware, natural coloured, to the value of £524,800, the weight being 59,178 metric tons, was exported from Germany during the first six months of 1913. A substantial increase is recorded.

Belgian Glass Exports during the first six months of the current year comprised: Window glass, 1,030,792 metric tons; plate glass (the only increase), 214,479 metric tons; other glass and glassware, 199,015 metric tons.

New Earthenware Factory in Austria-Hungary.—H.M. Consul at Vienna reports that the owners of an earthenware factory in that city, who wish to re-equip their works, desire to get into communication with United Kingdom manufacturers of ovens and furnaces and machinery and appliances used in the manufacture of earthenware. The name and address of the above inquirers may be obtained by United Kingdom makers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-st., E.C. Any further communications should be addressed to the British Consulate-General, Vienna, mentioning THE POTTERY GAZETTE.

The Belgian Glass Market.—The window glass market is already showing signs of increased activity, several considerable orders having come in from England and Japan, together with inquiries from South Africa and Australia. In spite of the unrest in China a number of large inquiries have been received. The conclusion of peace in the Balkans will certainly have a favourable effect not only in the Near East, but also on other markets. Prices remain unchanged. In plate glass the market continues quiet, and buyers are holding back. In England the strike among the silverers and glass cutters is crippling business and prevents makers from delivering, especially to London, which is the chief centre of these industries. In other markets the situation is fairly good, though not dazzling, the holidays interfering with business.

The San Francisco Exhibition.—The decision of the German Government not to take part in the San Francisco Exhibition has been semi-officially announced, the grounds for the abstention being that the participation could have no useful results. The attitude of the British Government is fully stated under "Parliamentary Notes." The "Manchester Guardian" having invited the opinion on the subject of a number of manufacturing firms engaged in various industries, Mintons, Ltd., Stoke-on-Trent, replied: "Had the Government decided to take part in the San Francisco Exhibition, we should probably have felt ourselves compelled to make an exhibit there. As doing so would, without doubt, have been exceedingly costly, and in our own particular case the benefits likely to result not at all in proportion, we are glad that the decision of the Government has given us the opportunity for not exhibiting. This is our present view of the matter." Josiah Wedgwood & Sons, Ltd., wrote "After consider-

ing this matter we feel that there is so much to be said on both sides of this question that we are not prepared to express an opinion."

Looking-Glass Imports to Finland.—The totals for 1911 (in brackets) and 1912 were as follows:—2,144 to 4,285 sq. centims.: From United Kingdom (774,344 sq. c.), 862,999 sq. c.: Russia (13,750,376), 11,853,841; Sweden (540,139), 164,833; Denmark (2,953,592), 3,480,069; Germany (13,181,200), 14,094,696; Belgium (581,805), 956,008. Total (31,781,456), 31,422,446. 4,286 to 6,122 sq. centims.: From United Kingdom (1,083,195 sq. c.), 1,170,628 sq. c.; Russia (17,624,004), 12,901,415; Sweden (105,958), 152,755; Denmark (1,011,376), 1,538,808. Germany (2,920,853), 3,254,666; Belgium (770,107), 1,357,911. Total (23,515,493), 20,376,183. 6,123 to 8,570 sq. centims: From United Kingdom (527,817 sq. c.), 431,348 sq. c.; Russia (4,376,333), 475,472; Sweden (90,392), 56,528: Denmark (733,913), 687,870; Germany (1,736,000), 808,118; Belgium (568,739), 1,326,063; other countries (—), 7,504. Total (8,033,129) 3,792,903. 8,571 to 12,243 sq. centims.: From United Kingdom (91,092 sq. c.), 57,996; Russia (4,093,892), 760,179; Denmark (185,054), 196,405; Germany (306,601), 509,806; Belgium (108,034), 297,556. Total (4,784,673), 1,821,942. Over 22,039 sq. centims. (by number): From United Kingdom (35), 252: Denmark (11), 25; Germany (5), 14; Belgium (143), 236. Total (194), 527.

Parliamentary Notes.

(FROM OUR OWN CORRESPONDENT.)

The San Francisco Exhibition.—In the House of Commons on August 5, Sir A. Williamson, asked the Secretary for Foreign Affairs whether the British Government had decided not to give official support to the San Francisco Exhibition in celebration of the opening of the Panama Canal; whether their decision had any connection with the attitude of the United States Government regarding the Panama toll question; and whether His Majesty's Government would assist British exhibitors desiring to take part in the exhibition. Sir E. Grey replied that His Majesty's Government have come to the conclusion that they would not in present circumstances be justified in asking the country to incur the heavy expenditure which they find would be necessary in order to participate in the exhibition at San Francisco on behalf of the United Kingdom. The decision was based on the estimate that an adequate participation in the exhibition would require an expenditure which Parliament must be asked to vote of over a quarter of a million, and that this would be quite out of proportion to any commercial advantages that are likely to result, and the question was considered and dealt with on these grounds without any reference to the Panama toll question. Indeed (he added), His Majesty's Government have done nothing to discourage the participation of the self-governing Dominions in the exhibition. As to the support that may be given to British exhibitors who desire to take part, he would be glad if the hon. member will put down a further question to the President of the Board of Trade. In the House of Commons on Aug. 13 Mr. Gibbs asked the President of the Board of Trade whether in regard to the Exhibition at San Francisco, if the conditions of foreign participation are altered by the authorities in the direction of securing for the United Kingdom a single collective national exhibit, he would reconsider his decision not to give his official support to the exhibition. In reply, Mr. Acland said the fact that national exhibits were to be scattered in different buildings, and not shown together as a collective national exhibit, was only one of the reasons which appeared to make participation inexpedient. He referred the hon. Gentleman to the answer given on Aug. 5 by the Secretary for Foreign Affairs (reported above), which fully explained the commercial and economic reasons which induced the Government to come to the decision they did. The circumstances did not appear to have altered since then. Mr. John O'Connor also asked the President of the Board of Trade whether any correspondence had passed between him and the promoters of the San Francisco Exhibition as to the representation of Great Britain, its manufactures and arts and crafts at the same, and, if so, would he publish such before the rising of the House? Mr. Buxton, in reply, said that beyond the transmission of documents and a letter on the subject of the protection of unpatented inventions and designs, no correspondence had taken place between himself and the promoters of the Exhibition. In May, 1912, a special Commission, presided over by Mr. John Hays Hammond, visited London to explain the scope of the Exhibition, and the further information which the Board of Trade required as to the conditions upon which foreign nations were invited to participate was obtained in San Francisco by an officer of the Exhibitions Branch of the Board of Trade sent for that purpose from this country. Mr. John O'Connor: Was it in the right hon. Gentleman's Department that the estimate of £250,000 was the probable cost of a British section was arrived at? Mr. Buxton: An officer of the Department went out there to inquire on the spot in regard to the question of expenditure, and came to the conclusion, after careful consideration, that to make anything in the nature of an effective exhibit—and unless effective it would be useless—the cost would be at least £250,000. Mr. John O'Connor: Had this officer any experience of either the Chicago or the St. Louis Exposition, and was he aware that at Chicago the British section was run at a cost of £60,000. Mr. Buxton: He made the best inquiries he could, and that was the conclusion he came to, and on examination of the figures I think he was probably correct. Dr. Chapple: In forming this estimate was consideration given to the fact that the canal will be opened quite a year before the exhibition is opened and that all goods will be sent by water transit? Mr. Buxton: I think that was taken into consideration. Mr. John O'Connor: Has the matter gone so far that it could not be remedied, that these exhibits might be collected all under one building, as in other expositions, and can he say whether this decision on the part of a Free Trade Government not to take part in this exposition is a proper return to make to the United States for reduction of its tariffs? Mr. Acland: I can only say that the regulation in regard to the scattering of the exhibits seems to be perfectly in accordance with the regulations of the exhibition authorities, and that it is only one of the reasons which induced the Government to think that the very large expenditure of £250,000 would not be justified. With regard to the last part of the question, the tariff is not yet reduced. Dr. Chapple: Is the hon. Gentleman aware that the German Union of Merchants is changing its mind upon the matter, and has come round to the view that Germany should be represented, and if in that case it would not be necessary for us to further our own trade and commerce by being represented there? Mr. Acland: I do not think that even that fact will induce the Government to go back on their decision that it is not justifiable to expend £250,000, which is two and a half times greater than that which the Congress of the United States is going to expend. Dr. Chapple: How is that sum made up? Have they taken into consideration land transport or sea transport? Mr. Speaker: The hon. member should give notice of that question.

Fragments.

¶ An Australian importing company write:—"We find your GAZETTE of very great assistance to us, and the arrival of each issue is always eagerly awaited."

* * *

¶ American papers attribute the British Government's refusal to participate in the San Francisco Exhibition to ill-feeling engendered by the Panama Canal tolls (pp. 1065-66). Readers of this GAZETTE, however, are well aware that no other explanation is needed beyond the simple fact that international exhibitions have been overdone, and manufacturers find the resultant benefit too small to justify the expense.

* * *

¶ A note accompanying a renewal subscription says:—"I value your GAZETTE too much to give up my subscription."——A Surrey dealer writes: "I am sorry I did not send before; the P.G. is so useful I should be sorry to miss it."——From a Berkshire stores: "I take this opportunity of saying how much I look forward to your GAZETTE every month, and often find useful information in it."

* * *

¶ The House of Lords has decided on appeal that initials such as "W. and G." are not eligible for registration as a trade mark, even when written in cursive characters. We know some signatures, however, that might very well be registered, as no one would recognise them as representing any definite letters of the alphabet.

* * *

¶ In a suburban railway station there is an advertisement in the form of a mirror, with the following legend printed over it:—"Not the best shop; but quite a tolerable shop for glass and earthenware. Messrs. So-and-So, High-street." It is to be hoped that such modesty is well rewarded.

* * *

¶ A Greek merchant has been summoned for having exported to Egypt 20 casks, under the description of "Earthenware," which contained valuable toilet sets. In slots in the casks 300 lbs. of the drug called "hashish" were concealed. The importation of hashish into Egypt had been prohibited owing to the pernicious effect it had upon the natives. It is to be hoped that the toilet sets, at any rate, were not a "drug on the market."

* * *

¶ A Double Event: A Northern druggist lately received a hurried call from a small girl who desired to buy some liniment and some cement. "Liniment and cement?" repeated the pharmacist, puzzled by the unique order. "Going to use 'em at the same time?" "Yes," promptly replied the youngster. "Ma she hit pa with a pitcher."

* * *

¶ A Glasgow paper records that a garrulous person sending on a consignment of breakable goods by sea to the West Highlands, called the other day on the shipper's man at the berth and buttonholed him for about an hour, imparting complicated instructions for the care of his precious stuff. The man reported thus to his superior:—"Mr. ——'s been here to tell me about a lot o' eheeny he's sendin' by the boat next week. He wants me to tell you that he's goin' to ca' on you to-morrow and tell you a' aboot it. He has telt me a' aboot it, an' a lot mair." No doubt many of our friends who have to do with the shipping of crockery would sympathise with this gentleman, who "could a tale unfold."

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

THE past month has been one of the most lifeless, uneventful Augusts in the modern history of the Potteries. The tendency to take holidays at this period is undoubtedly growing everywhere, but nowhere more than in North Staffordshire. I never saw the streets of the Pottery towns so deserted as they were during the Stoke wakes week, nor the atmosphere so clear; the district might for ever have been innocent of smoke for all the trace there was of it, except where it had left its indelible mark on buildings. The following week was but little livelier; indeed, the whole month has been completely under the holiday influence. Everybody seems to have been "away," from the humblest factory hand to the employer. The fact that the majority of the works had been more or less on short time for some weeks prior to the holidays does not seem to have affected the financial capacity of the potters to take their annual trip to the seaside. For one thing, the comparative slackness of recent times was preceded by a long period of regular employment, and then the pottery operative is learning the advantage of saving up for the holidays. He is becoming a thrifty person; once he was regarded as otherwise. It used to be said to his discredit that he borrowed the money to go to Blackpool or Douglas, returned when he had spent all, and took twelve months to pay back the loan. Now by means of the holiday club—an innovation that is becoming well established—he saves his money first and takes his holiday afterwards. At Longton over £3,000 was disbursed by various saving societies during the week preceding the Stoke wakes, and at Tunstall one society alone distributed well over £2,000 that had been saved shilling by shilling and week by week.

The flatness of the month has been due not only to the capacity of the workers to take a prolonged holiday, but also to the lack of necessity for them to return quickly to their labours. The lifelessness of trade demand during July has continued during August, and has, of course, been further accentuated by the holidays. The home market has been and is flat and dull without any qualification, and the oversea business, though not in the same category, has been anything but brisk. From Longton, especially, I hear complaints of bad business, for there manufacturers are chiefly dependent upon the home market. The only people who were well occupied during the earleir part of the month were builders, engineers and suchlike. The August holiday time is always the one for carrying out repairs, renovations and alterations, and this year many manufacturers have taken advantage of it—and in some cases given a longer period of "play"—in order to carry out the structural work required by the new Home Office Regulations. It will be some time yet before every works is structurally capable of fully complying with the requirements, for the task of altering some of the older ones is an immense one. One section of the pottery trade, despite the general slackness, appears to be enjoying prosperity, and that is the sanitary ware department, in connection with which the export demand is developing very encouragingly. We have taught or are teaching the world sanitation and sanitary engineering,

and as they develop, so the demand for sanitary ware increases, and none is as good as the English.

Business people can be generally divided into two classes —optimists and pessimists—and quite a large proportion of pottery manufacturers can be classed among the latter. Certainly recent trade conditions have tended to produce pessimism. Many manufacturers are looking very dolefully on the future, but I think the majority at the present time are regarding the coming months hopefully. No marked revival of business can be looked for until the latter part of September, but with a continuance of good trade in the staple industries of the country there are prospects of a good "fall" trade for the potters. I asked a manufacturer, who talked hopefully of the autumn business, to what he attributed the slackness of the past months, and he at once referred to that happening which seems almost ancient history to-day—the coal strike. "It is a long way to hark back to," he said, "but that is the indisputable cause. During that time, and for long after, no one could get goods, and they placed orders here, there and everywhere. But eventually they did get them executed, and in time they became overloaded. Why, I know one London house which, at the end of last year, was carrying hundreds of pounds of stock in excess of their customary amount, and a similar state of things obtained in many more cases, particularly in London." That almost certainly is the original cause; the stoppage of April of last year upset all the usual course of supply and demand, but there is little doubt that since then increased selling prices have had a very considerable effect. Retailers well or fairly well supplied with goods have been reluctant to buy at enhanced rates; they have lived in the hope of reduced rates being obtainable. Whether or not their waiting policy has availed them in many cases it is difficult or impossible to ascertain, but certainly times of limited demand are a source of great temptation to manufacturers to forego increases. Certain it is that pottery producers cannot afford to sell at anything like previous rates, and if they bide their time, retailers must inevitably accept the new condition of things. Stocks cannot last for ever.

At any other than a holiday season, the strike which has been in operation for a month among the china clay workers in Cornwall would have been regarded with serious apprehension by pottery manufacturers; as it is, and under present conditions of trade, they appear to be ignoring it and its consequences. The last information to hand—received a day or two ago—was that all the clay pits were standing and the output was reduced to nil. Stocks of china clay in the Potteries, I hear, are greatly depleted, for practically no consignments have reached the district for a month, and prices are at a considerably advanced figure. As showing how some manufacturers regard the matter, I quote an incident which was related to me the other day. On being told that he could have china clay at so much a ton more, the manufacturer replied: "Oh well, I can do without it at present; in fact, for the business that is doing I might as well shut up altogether for a week or two." The position of affairs, however, is serious so far as the Potteries is concerned. When work is resumed in Cornwall, some time must elapse before a normal supply of clay is available, and then, of course, the demand will be immensely greater than the supply, for many other people besides potters use china clay—for instance, paper manufacturers, who take many thousands of tons yearly. The output of the Cornish clay mines is approximately 1,000,000 tons per annum, and the loss of a month's output means about 80,000 tons. The net result must be scarcity of china clay for some time, with enhanced prices. Pottery producers are getting used to increased prices for raw materials, but they are the none the more welcome.

The question of the Harecastle Canal tunnel has for many months been occupying the attention of the North Staffordshire Chamber of Commerce, and at a recent special meeting the members formally reiterated their request that the Board of Trade should send down an inspector to report as to the condition of the "new" tunnel, that being the one which is the source of anxiety. During the holidays the Board of Trade, in compliance with the request, instructed one of their inspectors, Colonel Druitt, to make an examination. This he has done in company with representatives of the North Staffordshire Railway Co. (the owners of the canal) and representatives of the Chamber of Commerce. His report is now awaited.

What the Chamber originally urged upon the railway company was the construction of a deviation canal, which would avoid the Harecastle Hill, but the company's reply was that the expenditure would be such as would not be reasonable to ask the shareholders to undertake, and also that the present tunnel was capable of being effectively repaired. This question of the Harecastle Canal tunnel is quite apart from the scheme for providing a better waterway from the Mersey ports to the Potteries. It has arisen through the circumstances which have endangered our present facilities, but if the proposed deviation canal could be constructed, it would become part of the big canal whenever that is cut, as it probably will be, though the date may be delayed beyond the time of the present generation.

The danger of a stoppage in the coal industry of North Staffordshire on the non-union question has been materially lessened since last month. The ballot on the question of tendering notices, unless all the men and boys could be brought into the Miners' Federation by other means, proved so overwhelmingly in favour of tendering notices as to reduce rather than increase the probability of a strike. Ballot forms were issued to 24,000 men; 16,874 voted for giving notice, 841 against, and 6,285 did not vote. The majority in favour of giving notice was, therefore, 16,033. When the delegates of the North Staffordshire Miners' Federation met to consider the result of the ballot, it was reported that 95 per cent. of the men and boys were in the union, leaving only 5 per cent. or about 1,500 out of 30,000 to be "rounded up." In view of this, a committee was appointed to obtain the names and working places of the remaining non-unionists, and it was agreed to decide later whether to bring the men out on strike or to deal with the matter pit by pit. Since then the outstanding men have been gradually coming into the union. As for the pottery manufacturers and operatives, they are not much interested in the question of whether the miners are unionists or non-unionists, but they are deeply concerned in the maintenance of the coal output in North Staffordshire.

Our Potteries correspondent, writing on Aug. 26, further states: Last night a fully attended delegate meeting of the North Stafford Miners' Federation was held at Burslem to further consider the non-unionist question, and it was decided that if by Sept. 20 next there are still some workers outside the union, general notices to cease work shall, if necessary, be tendered on Sept. 27. The effect of this step, if carried out, would be to bring about a complete stoppage of coal production in North Staffordshire a fortnight after Sept. 27. The decision seems an ominous and drastic one, but its portent is not so serious

as appears at first sight. As a matter of fact, out of the 30,000 men and boys working "in or about" the North Staffordshire mines, only 800 to 1,000 now remain outside the Miners' Federation or the Enginemen's and Navvies' Unions. It is true that the Miners' Federation is determined to bring in these 800 or 1,000 workers, but there is very little doubt that under the influence of active propaganda and this latest threat of a general stoppage, most of them will be converted to trade unionism. This decision to hand in notices on Sept. 27, "if necessary," may, in fact, be regarded as a further means of persuading or coercing the remaining non-unionists. When I wrote a month ago, there was a very real danger of a stoppage eventuating, but after the way in which the men have come into the union during the last few weeks, I repeat that the danger is very considerably lessened.

In the last issue of THE POTTERY GAZETTE I outlined the excellent scheme which the Stoke-on-Trent Education Committee had adopted for co-ordinating the art education of the federated borough, including the appointment of Mr. Stanley Thorogood, A.R.C.A., the principal of the Burslem School of Art, as Superintendent of Art Instruction. Since then a hitch has occurred in the carrying out of the scheme. The proposals meant that the other four headmasters of art schools—Hanley, Stoke, Longton and Tunstall—would become specialists, teaching various subjects of particular importance to pottery students, of course, under the direction of the Superintendent. The four headmasters concerned are, however, reluctant to accept these appointments, regarding them as of a lower status than their present positions. At the last meeting of the Stoke-on-Trent Education Committee, it was stated that they had intimated that they preferred to retire on compensation to accepting the new appointments. In order to permit them to do so if they chose, the Higher Education Sub-Committee recommended that the offices of the headmasters of the art schools be abolished as and from Aug. 31. Considerable discussion took place, chiefly on the subject of the payment of compensation. Eventually an amendment to the effect that the recommendation be referred back to the committee was carried. Presumably, therefore, the whole question will come under reconsideration.

In connection with the recent International Medical Congress held in London, a medical museum was organised, and one of the exhibits was contributed by Dr. Frank Shufflebotham, of Newcastle-under-Lyme, who has conducted prolonged research into the questions of industrial diseases. His exhibit showed the effect of clay-dust upon the health of pottery workers, and consisted of post-mortem specimens and a series of micro-photographs, which clearly demonstrated the harmful effect of siliceous dust. Even before the present regulations came into operation, manufacturers had done very much to remove the dust danger, and potters' asthma, commonly known as "potters' rot," has now become very rare indeed. The exhibit demonstrated how the sharp-edged particles of clay-dust invade the lining membranes of the air passages of the lung, and pass by the lymphatic channels to the various glands connected with the lung, thus being distributed throughout the whole of the lung tissue. In its distribution the lungs are damaged by the sharp-edged particles and scar tissue is eventually formed. In the course of years the lung becomes fibrous and inelastic and the patient subject to bronchitis and other lung diseases, while the heart invariably becomes dilated and eventually fails. In contradistinction to a common belief, it is interesting to note that in pure and uncomplicated cases of potters' asthma there is no tuberculosis.

Through the medium of the Royal visit the Potteries has become known in the most out-of-the-way corners of the globe. A few months ago a former Hanley art student, Mr. F. S. Harrop, was appointed Director of Arts and Crafts at Bangkok, Siam, and in a letter dated July 11 he gives the interesting information that "a much-used film of the Royal visit to the Potteries found its way right out here, and was shown at the local cinema last evening. It was a rare treat to see a Pottery crowd again, especially when viewed across the heads of such a mixed collection as Siamese, Shans, Hindoos, Chinese and Japs. The pictures were billed, as the principal attraction, in three languages." ——Mr. Percy Gleaves, A.R.C.A., formerly a student of the Burslem School of Art and now on the teaching staff of the Swansea School of Art, has secured the chief art award at the Welsh National Eisteddfod, having been awarded the first prize for a painting in oils, depicting an event in the history of the county of Glamorgan. Last year also Mr. Gleaves secured the principal prizes in connection with the Eisteddfod.

It is sad to record that two Potteries people died suddenly while on their holidays. Mr. John Howarth, of Victoria House, Stockton Brook, who for twenty years had been engaged as overseer at the mills of Harrison & Sons, colour manufacturers, Hanley, died suddenly at Blackpool on Aug. 8. After having visited the South Shore pleasure fair, be became ill and was driven to the residence of a doctor, but died in the cab shortly after arrival there. Mr. Howarth was well known amongst business men in the Potteries. On the previous day (Aug. 7) Mr. W. Boon, a foreman potter, of Campbell-road, Stoke, was taken ill at Rhyl and died before medical aid could be secured.

Arrangements are now being made for the British Pottery and Glass Manufacturers' Annual Fair, which is to be held from Feb. 16 to Feb. 28, 1914, at Stoke-on-Trent. The Council of Stoke-on-Trent are placing at the disposal of the Committee the Town Halls in the district, where each manufacturer can have a private showroom. Full particulars can be obtained from the Secretaries, Mr. Jas. A. Wood, Oriel Works, Hanley, and Mr. J. Paterson Brodie, Lloyds Bank Chambers, Burslem.

THE STOURBRIDGE, BIRMINGHAM AND NORTH OF ENGLAND GLASS TRADES.

(FROM OUR OWN CORRESPONDENT.)

IT is pleasant to be able to report that, taking the whole area of the glass manufacture from the Midlands to Northumberland, the correspondents who supply the present writer with information for the purposes of this article agree in saying that with very few exceptions the trade is in a healthy condition and is improving, though the number of workpeople employed is hardly as large as it was at the beginning of the year, or even twelve months ago. Labour unrest in various parts of the country has had a somewhat depressing effect, as things are rather quieter now; hence the change for the better, slight at present though it be, will be welcome.

Stourbridge and Wordsley firms making the finest qualities of flint glass continue to experience a gratifying demand for their beautiful and costly productions. Their cutters are kept busy in adorning the splendid specimens of art workmanship produced by the men in the glass-houses, and work, too, is found for the high-class engravers. Coloured glass in fancy designs for electric lighting is being manufactured, and very elegant are the

articles. The flower season is over; still something is being done here and there in vases, &c., mostly, there is reason to believe, on export account. Some firms are busy with pressed work, dishes and epergnes being amongst the things made. For tumblers there is not a large demand just now. Attention continues to be paid to the proper training of youths for the flint glass trade in its higher branches, but, as has been the case previously, the lads, many of them, are not too eager students. It would hardly be fair to describe them as slackers. They do not seem to discern the advantages a close attention to art teaching would give them.

In Birmingham, despite the activity of foreign competitors, to say nothing of home rivals, glass manufacturers are doing fairly well, especially in certain branches of the trade. One spirited firm has struck out a new line, and will shortly place on the market fancy glassware, for which a large sale is confidently anticipated by reason of its novelty and beauty. An exhibition of the glass at one of the leading hotels in the city attracted much attention, and was favourably commented upon by the visitors. The unsettled weather that has prevailed much more in the Midlands and the South generally than in the North of England has adversely affected the manufacture of mineral water bottles, and there has not been the demand that had been expected for fruit and other jars. Makers of inks and small bottles are well employed, and have had a busy summer season.

A notable citizen of Birmingham has passed away in the person of Mr. Henry Follet Osler, a remarkable man in many respects. His death occurred on Aug. 10 at his residence, Burcot Grange, Bromsgrove, after a long illness borne with exemplary patience and fortitude. Mr. Osler, as many readers of THE POTTERY GAZETTE will know, was head of the firm of F. & C. Osler, Ltd., flint glass manufacturers, who also carried on business in another part of Birmingham as makers of electrical fittings. He was an ardent friend of education, and gave strong pecuniary and personal support to the Midland Institute; also to various other organisations established for the uplifting of the people. A widower, he is survived by one daughter. The funeral of the deceased gentleman took place at Bromsgrove, and the mourners were many. His connection with the glass trade certainly tended to its improvement.

In Lancashire, where there is a wide range in the manufacture of glass, business has been fairly good during the past two months in most branches. The Manchester flint houses, though not pressed with orders, are doing fairly well both in plain and other goods, these latter being those produced by the press, and largely bought by licensed victuallers and by the middle classes so far as relates to goblets, sugars and creams, celeries and dishes, the latter including epergnes. Cut glass of medium quality in wines, tumblers, &c., keeps in favour. There is fair activity, and has been for a few weeks past, in fancy vases in colours, some pretty designs having been produced, and which seem to hit the public taste. A firm at Newton Heath is building a new furnace in order to meet the demand for the class of goods they make. The glass bottle trade keeps in a healthy condition, and in Manchester another "burst off" works has been started with every prospect of success. The bottle trade, though the business during the summer was not in as large a volume as had been expected, is in a healthy state. The recent strike of bottle hands at Salford proved a dismal failure so far as the men were concerned. They had "come out" without the sanction of the executive of their union, and as a protest to the use of machines. The employers, as a counter move, bought more machines for making jars, bottles, &c., and they imported a few men from London, experts at tending the machines, and are now building another tank, and are expected to start additional machines, thus bringing more unskilled labour into operation. The strikers have, most of them, obtained employment in other parts of the kingdom. Taking the bottle trade generally, there is moderate activity, but no push—to use the phrase of a practical manager of long and varied experience. In machinery glass rather more is doing than for some time, and prospects for the remainder of the year are considered satisfactory. The tubing trade is busy, and competent workmen are scarce. Employers engaged in this branch find it difficult to make up further chairs. One result of this state of things is that prices are more firm, and the cutting that prevailed some months ago has ceased, or nearly so.

In St. Helens the glass trade is not as busy as it was in the early summer, but the outlook is healthy, and there is a briskness in certain departments, and full time is being worked. The demand for plate glass keeps up well. The business now being done is chiefly home and Colonial. German sheet glass has slackened somewhat in demand, the unrest in certain of the building trades having had a depressing effect. The bottle trade has hardly come up to the expectations of either masters or men. It was naturally thought that the fine, dry, and warm weather, of which the country has enjoyed a fairly long spell, would lead to a much more than average call for mineral water and beer bottles. But such has not proved to be the case, and many persons engaged in the business are wondering why there has been a falling off. The relations between the bottle makers and their employers remain cordial. That cannot be said of the sheet glass workers. Through their trade protection society they have issued an appeal to the Trades Congress for help in a struggle now taking place. It is not for us to say whether the contest is a just one on either side, but we may name that it is being fought on the question of whether certain agreements should continue to be enforced. A side issue of some importance is as to the number of apprentices, which the men say is excessive, and "swamping" them. About the glass trade in Warrington there is only this to say, that it remains in a healthy condition, and that good table work continues to be turned out, the reputation of the town as a centre of the industry being well kept up.

Turning to South and West Yorkshire, where most of the bottles manufactured in the United Kingdom are produced, we find that the industry has fallen off somewhat; "to an almost trifling extent really," says a Barnsley expert. He and others engaged in the trade are unanimous in saying that there has been a smaller demand for soda water and lemonade bottles, and also for pint and other beers. To some this was a surprise, the summer weather being genial, and, they thought, thirst-provoking. Screw-stoppered beers are being made in South Yorkshire in fair quantities, to the orders of bottlers who do an export business with the Far East. Of stocks generally large clearances from the warehouses will be made before the end of the month just entered upon. Prices of all classes of goods have been well maintained. The use of machines, especially for the manufacture of fruit jars and certain makes of bottles, has grown a little during the past couple of months. This branch of business increases at Barnsley and Knottingley, and there is a good deal doing in it at Thornhill Lees. Makers of "glory-hole" work at Castleford and the first-named town have had full employment. Flint glass medical bottles have been in strong request, owing largely to requirements under the Insurance Act. A new development in stained glass windows for churches and other public buildings has been lately introduced by a Leeds firm. It is claimed that, unlike the hitherto existing stained glass windows, the newly invented ones can show

the figures, or other forms, at night from the interior of the structure in which they are fitted. A window has already been placed in a church at Halifax.

In the city of York the production of green glass aerated water bottles has fallen off very little. For medicals, in flint as well as in the cheaper materials, there has been a good call, and this branch is still active. For tableware, of the good quality produced at York, there is a full average demand. Much has been said of the severity of foreign competition, and an instance of it was seen by the present writer when in that city a few days ago. A local tradesmen advertised a gas burner with inverted mantle and globe "ready for fixing," the price of the whole being one shilling. If a fancy globe was required a penny extra was named as the price, and twopence for a coloured globe. Literally, as in the case of small pictures of the stage 50 or 60 years ago, "a penny plain and twopence coloured"! One wonders what wages the foreign workman receives for making the globes, which, allowing a reasonable profit to his employer, and one to the British dealer, and defraying freight and railway fares, can be retailed here at a penny each.

In the Tyne and Wear district, further north, the bottle trade had fallen off somewhat; for instance, at Seaham Harbour and Sunderland; but in both places an early recovery is confidently relied upon. For flint glass there was an improved inquiry, also for pressed goods for domestic and hotel use, most marked perhaps at Newcastle. Cutters were doing fairly well; they could not be described, however, as very busy.

Three generations of glassmakers have had their day since 1823, and an account of a remarkable display by the workers of Newcastle and Gateshead, chairmen, servitors, and footmakers, furnished by a friend of many years, may interest the readers of THE POTTERY GAZETTE. All engaged in the trade, cutters included, formed in procession on Sept. 12, and marched through the streets, each man carrying some specimen of glassware remarkable for its curious construction or beauty of design and workmanship. The ringing of church bells ushered in the morn, and notices of the intended procession having been previously circulated, great numbers of people lined the thoroughfares. A little after 12 o'clock the procession started, moving along the Close amid the cheers of the spectators, the ringing of bells, and the firing of cannon, the band of the Tyne Hussars leading and playing patriotic marches. The procession was composed of the Northumberland, the South Shields, the Wear (Sunderland), the Durham and British (Gateshead), the North Shields, and the Stourbridge (Gateshead) glass companies, each being distinguished by its special flag. "The sky was clear, and the rays of the sun," says the report, "falling on the glittering utensils and symbols, imparted richness and grandeur to their appearance, as carried by the men. The hat of almost every person in the procession was decorated with a glass feather, and on each man's breast was a sparkling glass star, and around the neck was a chain or a collar of variegated glass." What the staple articles of the trade were ninety years ago was shown in a profusion of decanters, goblets, tumblers, punch bowls, dishes, claret jugs, &c. Elegant birdcages of glass, and some of these it is declared by the old chronicler contained feathered occupants, "which sung at intervals during the procession." Obedient and obliging songsters! Salutes were fired from a fort on which glass cannon were mounted—for show—"to the astonishment of the spectators," who were not aware that the weapons really fired were of brass or cast-iron. A bugler accompanied the procession, and not only sounded the halts, but played several marches, and his crystal instrument was "much admired for its sweetness and correctness of tone." On reaching the Mansion House the procession halted, while (it is so declared) "a salute was fired from the glass cannon"—a tale for the Marines! Gateshead was visited, and "the processionists returned to Newcastle—to dinners provided at different inns," where no doubt they proved themselves to be good trenchermen!

THE CORNISH CHINA CLAY INDUSTRY.

(FROM OUR OWN CORRESPONDENT.)

THOSE who had hoped that the clay industry of Mid-Cornwall would emerge promptly from the labour unrest recorded in our last issue have been disappointed. The whole of the clayfields have been overtaken with the menace of a clay workers' strike, and at the time of writing the industrial prosperity of the whole district is seriously threatened. As we announced in the July number of THE POTTERY GAZETTE, the West of England and Great Beam China Clay Co. had conceded to the men's petition for an advance in their wages by an increase of 1s. 6d. per week, which added quite £4,000 per annum to their cost bill. Similar important concessions were also made by Martin Bros., of Plymouth and St. Stephen's-in-Branwell, and by North & Rose, of St. Austell. However, the unexpected has happened, and the prospects of an amicable settlement is fraught with almost insuperable difficulties. The older clay workers do not forget the nine weeks strike thirty-seven years ago (when their wages were about 12s. to 14s. per week), which resulted in a slight advance to 15s. per week. During the first week of the present struggle the disaffection was confined to Carne Stents Clay Pit, and after a private conference of the Workers' Union it was decided to adopt the "down tools" policy forthwith. The men at other works responded, but on reflection asked to be re-instated; consequently less than 150 of the 5,000 clay workers were affected at the outset. Marching routes by the strikers were organised, and although there was a stout resistance accorded them generally in the earlier stages, yet hundreds capitulated to the visiting gangs. A meeting of the employers was held, and a committee formed to consider a method whereby a greater uniformity in the labour conditions might be obtained. The union could not claim a third of the employees in the trade at the beginning, but many non-unionists stopped work for fear of the consequences if they remained. Rapid developments followed, and the numerous clayfields of Bugle and Stenalees which had remained up to this point unmoved by the eager solicitations of the strikers were forced to give in, thus rendering the standstill almost complete. A meeting in the Fair Ground was attended by nearly six thousand people when the strikers' resolution was endorsed, viz.: (1) To secure the recognition of their union; (2) the demands set forth in their petitions to be satisfactorily met; (3) every man to be re-instated in his original position. One of the union officials remarked that "no more clay will be got out of the pits. No more wagons will go through the streets of St. Austell. No more ships will leave Fowey, Par or Charlestown with the clay until the claims of the men have been adequately and fairly considered." It was intimated that the chairman of the St. Austell Urban District Council (Mr. W. J. Nicholls, J.P.) was making an effort toward mediation which was heartily acclaimed by the men's representatives, and other gentlemen have consented to assist if mediation is at all acceptable. The Hon. T. C. Agar Robartes, M.P., visited St. Austell in the following week and intimated that the Under-Secretary to the Board of Trade would send down Sir George Askwith as mediator if both sides would

accept him. This proposal was agreed to by the men, but the masters referred it to a general meeting of the Masters' Federation. On August 20 the masters met to consider the situation. The efforts at mediation on the part of the gentlemen already referred to were all refused, and after a lengthy deliberation the Federation announced that:

"All the works are open to the men to resume work on the same conditions as they left, and whatever happens the present rate of wages will not be reduced.

"After the men return to their work any personal grievances they may have will, on representation to their respective employers, be fully considered and, if justified, dealt with. Having regard to the recent advances in wages and the general disposition of employers to treat employees on equitable terms, and also considering the special local conditions of labour as to the length of a day's work and payment made for wet weather, the employers are of the opinion that the wages paid by the china clay trade for practically unskilled labour are the highest paid by any large industry in the West of England, and bears most favourable comparison with the wages paid in any other part of the country for work which can be reasonably placed in the same classification."

On the eve of the masters' manifesto a bar of dynamite was placed in a tin can with a fuse and cap attached, and left at the back door of one of the shift bosses who resides at one of the new West of England and Great Beam China Clay Co.'s cottages at Curyan-road, Nanpean. It was exploded between the hours of 11 and 12, considerably alarming the neighbourhood. Portions of the tin can were found embedded in the door. Several windows were smashed and the door forced in. Fortunately none of the occupants were injured. Up to the time of writing no arrest has been made. Since the masters' meeting the supporters of the workers' movement have been directing their attention on those works particularly in the Bugle area, where men had resolved to resume work, and in spite of their vigilance a few cargoes have been got away. The North Cornwall area does not come within the purview of the petition before the clay companies of Mid-Cornwall. The union official has stated that he has received an invitation to go there, but he is too busy with the work in St. Austell district that it is difficult to find time to accept the suggestion.

According to an authoritative statement nearly £8,000 is lost weekly through this strike. The clay carriers are being temporarily engaged in the coal traffic and the coopers are practically idle. Hopes are expressed that the cloud which is overshadowing this flourishing neighbourhood may soon be dispelled.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

SINCE last date of writing we have had what many regard as "fine" weather to quite an unusual degree. Sunshine has prevailed, day after day, and week after week, almost without a break. Practically there has been no rain at all during that time in quite a number of the districts in Scotland. For our own industries, of china, glass and ware generally, the immediate effect of this record period of sunshine and absence of rain has been plainly beneficial. Better shopping conditions there could not have been, and the retail merchants in the inland settled resorts have been sensible of the effect of that, for, as a rule, August is a very slack month for them; but this year, during August, there has been more doing. This has been marked in all grades of the retail business, even including those shops that deal almost exclusively in the purely utilitarian and cheaply priced lines; but it is the higher class or fancy ware emporium that have come in for the best of the extra counter trade. As already noted, money for buying good-class articles of ware—china, glass, crystal, &c.—has shown itself to be more plentiful, while, at the same time, the possessors thereof have evinced signs of more willingness in the spending of the same. This manifestation has continued during August, and been of a degree still more noticeable than before. Foreign visitors to the Scottish centres and other resorts have this year been remarkably abundant, and although our wares are not of a sort easy of being carried off by people of passage like that, flitting hither and thither day by day, still our high-class saloons have attracted a good deal of notice, leading to purchases substantial enough, at least, to be reckoned in the general account.

Business at the coast watering-places and at the inland spas and other favoured resorts for the confirming of health and recuperation of the same, has during August done very well indeed. Although a very late season in its commencement, owing to the enduring prevalence of most unseasonable and unsummer-like weather, long after the calendar or conventional summer had come in, the later conditions of an almost unprecedented glory of weather have quite retrieved the position, and the season of 1913 is to rank as one that came up to the average at least, with, perhaps, a little something over. Orders (some of them repeats) from these season districts during August have been coming in upon the wholesale merchants well, and it is noted that glass goods have been specially in call.

The wholesale merchants, while attending to the passing needs of the retailers at the health resorts, as above noted, have, at the same time, through their travellers, been working Scotland generally, after orders for the later requirements of the autumn or fall. A fair share of encouragement has been met with in this prospective department, and there is no disposition to grumble, remembering the leanness of so many of the past years, but there is no push or pressure to report. The exceedingly fine weather of August has here operated unfavourably, for the budding crops have been suffering through over-abundant heat and an almost total lack of rain or moisture in any form, and it need not be recalled that these very sensitive trades always feel the effect, ultimately, of a short cereal harvest. However, there is still time for at least partial recuperation if rain of the right sort were to come away soon, and so continue over the first half of September. The other harvest that bears well or ill on china, glass, and earthenware business in Scotland is the harvest of the sea. This promised badly a month ago, especially in regard to the takes of herrings, which, up to that time, had been extremely poor. It is gratifying to be able to report decided improvement during August, which helps the outlook a little.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, July 24.

A DEPUTATION from the Commonwealth Art Pottery and Insulator Company Proprietary, Ltd., waited on the Postmaster-General in Melbourne during this week. The leader of the deputation said their object was to ask the Postal Department to co-operate in the establishment of a new local industry. Until comparatively recently, the manufacture of insulators had been confined to

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Germany, Austria, and Bavaria. The process was secret. Only during the last 18 months was local experiment successful in making an insulator, the capacity of which to resist an electric current was such as to comply with the specifications as set down by the Department. Now, however, his company was in a position to offer insulators which, the departmental officials admitted, more than complied with requirements. Clay deposits had been for the first time thoroughly tested, and it had been found that Australia possessed some of the finest clays in the world for pottery purposes. His company had purchased 3½ acres of land at Blackburn and 5 acres at Ringwood in order to be able to get the requisite blend. The company had spared no expense to adequately equip their works with up-to-date machinery, all of which was manufactured locally. At present there were 50 men employed, many of whom were experts. It was hoped that, with the co-operation of the Postal and Railway Departments, employment would soon be given to 300 men. There were now 1,450,000 insulators, representing 12 months' supply, required. Every encouragement had been-offered by previous Governments to the establishment of the industry. There were at present two of the company's tenders for the supply of insulators to the Postal Department awaiting answer. It was hoped that these tenders would be accepted, and that, at approved rates, the company be given the exclusive contract to supply 250,000 insulators to the department annually. It was requested that the company should be given a preference of 25 per cent., as against 15 per cent. at present, over imported insulators, and that the attention of the Minister for Customs be drawn to the fact that 20 per cent. duty on insulators was all too inadequate to properly encourage local manufacture.

The Minister, in reply, said the policy of the Government was always to encourage home industries. He did not like to see money going out of the country for goods that could be made locally. His department used £13,500 worth of insulators annually. Probably the Railway Department used as many. The deputation was misinformed as to the duty imposed, which was 25 per cent., not 20 per cent. The deputation had asked for what was practically a 50 per cent. preference. There were two other pottery companies manufacturing insulators in the Commonwealth. His department was at present calling for a three years' supply. When the tenders came in he would be in a better position to answer them. He would bear in mind carefully all they had said.

An extraordinary meeting of shareholders in Wunderlich, Ltd., was held in Sydney last week, and empowered the directors to increase the capital to £300,000 by issuing 100,000 new shares at £1 each, with such preferential rates as the directors may determine. The articles were altered in connection with the election of directors. The capital issued at the date of the last balance-sheet was £162,591, of which £40,000 was in 7 per cent. preference and the balance in ordinary shares of £1 each. The last distribution on the latter was at the rate of 10 per cent. per annum.

Values of imports into the whole of Australia for the first six months of the current year, compared with the corresponding half of last year, include the following items of trade interest:—Earthenware and china, 1913, £206,408; 1912, £214,136—decrease, £7,728. Glass and glassware, 1913, £209,106; 1912, £284,639—decrease, £75,533.



The Gazette.

Dissolution of Partnership.

NOTE.—*When two dates are given in the following announcements the first is the date of the dissolution. The date in parentheses is that of the official advertisement.*

OAKES JAS. (Jno. Oakes, Jas. Oakes, and Willie Oakes), Darley Hall and Croal Brick and Tile Works, both Farnworth, brick, tile, and pottery makers. July 22. Debts by said J. Oakes and his son, Saml. Syddall Oakes, who will continue said business under the same style. (July 25.)

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

DENNIS POTTERY CO., LTD., Fenton.—C. E. Harding, 27. Glebe-st., Stoke-on-Trent, appointed receiver, July 26.

MARSDEN TILES, LTD., Burslem.—C. E. Bullock, 17, Albion-st., Hanley, appointed receiver, July 25.

TAMWORTH ENCAUSTIC TILE CO., LTD.—G. Bourne ceased to act as receiver, Aug. 12.

Notice of Intended Dividend.

WELLS REGINALD FAIRFAX, trading at 11, Sloane-st. and residing at 18, Oakley-st., having a workshop at 10A, College-st., all Chelsea, sculptor, potter, &c. Claims Sept. 6 to E. S. Grey, Bankruptcy-buildings, Carey-st., W.C., O.R.

Application for Debtor's Discharge.

RATHBONE SAMPSON, late Abbey Pottery, Milton, now 44, Davenport-st., Tunstall, late earthenware manufacturer, late trading in co-partnership with, &c., as &c. At Town Hall, Hanley, Sept. 17 at 10.30.

Notices.

CONNELLY THOS., 61, Glaisnock-st., Cumnock, china merchant and general dealer, retired from said business as at Aug. 1, when the business was transferred to his son, Thos. Connelly, jun., who will carry on the business under the same name, and pay all debts due by, and collect all debts due to, the business. (Aug. 15.)

RIGG ISAAC & SON, 95, Buchanan-st., Glasgow, glass and china merchants. The business, of which the late Roderick Allison Rigg, who died on May 28 last, was sole partner, has now been acquired from Mr. Rigg's Exors. by Robt. Sidey and Miss Annie Reid, who have long been connected with the business, and will henceforth continue it in the name of Isaac Rigg & Son, of which they are now the sole partners. Any accounts owing to the firm at Mr. Rigg's death will be collected by the new firm for his trustees. (Aug. 5.)

Notices under Assignments, &c.

CUNDIFF JAMES FREDERICK, 20, Haddon-st., Gorton, Manchester, JOSEPH CUNDIFF, 80, Manchester-rd., Hyde, near Manchester, and THOMAS EDWARD CUNDIFF, 136, Market-st., Hyde, near Manchester, trading as F. Cundiff & Sons, 186, London-rd., Manchester, leaded light makers and glass embossers. Adj., Aug. 13.

LISEMORE FRED. H., 31, Norman-st., Leicester, china dealer. Liabilities, £144 3s. 4d.; assets, £13. The following are creditors:—Lazarus & Rozenfield, London, £11; Harrison & Phillips, Burslem, £14; E. C. Pevher, Leicester, £44; T. Poole, Longton, £19; Rateliffe & Co., Longton, £16; St. Louis Art Pottery Co., Longton, £15; Heath & Co., Woodville, £11.

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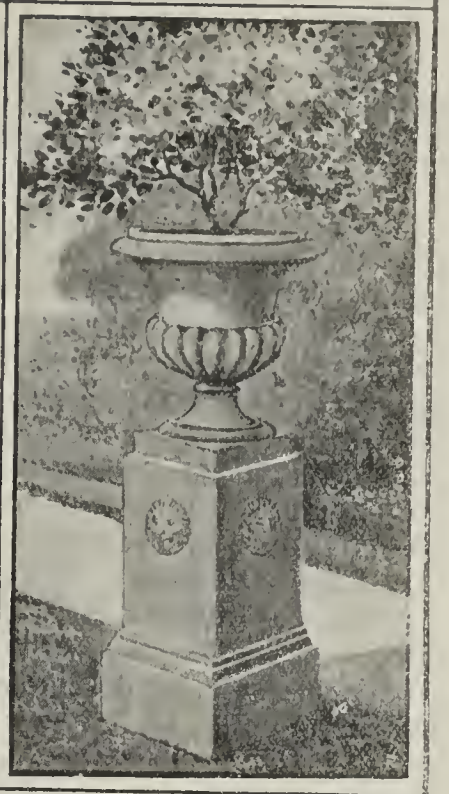
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Dividend Payable under Trust Deed.

Baxter Geo. & Son, 82, High-st., Edinburgh, china merchants. First and final, at R. G. Morton's, 8, North St. David-st., Edinburgh.

Dividend Payable.

Malloch C. & J., 304, St. Vincent-st., Glasgow, glass merchants, glaziers, and plate-glass silverers. Fourth, at P. Rintoul's, 212, West George-st., Glasgow, on Oct. 4.

Bankruptcy Proceedings.

Calvert John James, 21, Henry-st., Coatham, Redcar, late 47, Newport-rd., Middlesbrough, Yorks., late china dealer. This debtor attended at the Court House, Wilson-st. West, Middlesbrough, on Aug. 15, for his adjourned public examination, on accounts showing liabilities amounting to £98 13s., and a deficiency of £85 3s. It was stated that the debtor was now engaged as a commercial traveller at Redcar, near Middlesbrough, The Official Receiver had no further questions to put to the debtor, and the examination was therefore concluded.

Hemmings William Henry, Drayton-st., Wolverhampton, and the Market Hall, Brierley-hill, Staffs., wholesale china and earthenware merchant. The adjourned public examination of this debtor was held at the County Court, Wolverhampton, on July 30. The Official Receiver called attention to some statements of goods received, which debtor admitted had not been included in the statement he had prepared, although he admitted receiving the goods. The Official Receiver said he did not suggest that they had been intentionally omitted. Debtor admitted having said at the first hearing that he paid £9 10s. a week of cash takings for running expenses, but the Official Receiver pointed out that the amount in his statement for 20 weeks was double what it would be on that basis, viz., £400, where there was only an explanation of £200. He asked for an explanation of the difference of £200. Debtor said if he had done that he had made a great mistake. With regard to a fire at his premises, debtor said he was insured for £1,000. He claimed £275, and received £195, although the damage was between £500 and £600. He did not amend his claim when he found he had underestimated his loss, although he was in financial difficulties. He denied, with regard to a loan of £60 from a Mr. Harvey, that he repaid it in full; he still owed £20. The Official Receiver said he had seen Harvey's bank book, and on the date in question he paid in £60 to his account. The debtor said that might be, but it was not from him. Debtor said that a wagon bearing his name belonged to his wife, who bought it from the trustee. The Official Receiver said the matter required investigation, and the examination was thereupon adjourned.

Hoyle George, Church-lane, Torrington, Devonshire, late china, &c., dealer. This debtor attended at the Guildhall, Barnstaple, on Monday, Aug. 11, for his public examination before Mr. Registrar Ffinch. According to the statement of affairs prepared the liabilities amounted to £62, and the assets were estimated to produce £20 odd, leaving a deficiency of £41. It appeared that the debtor purchased the china business two years ago for £144 odd. Of that amount £25 was paid down, and the balance was agreed to be paid by instalments, but there was still £34 odd due to the vendor. Debtor knew nothing of the business, and bought it at the vendor's valuation. He had spent just over £350 on stocking the business, and this stock had been sold for £320. Debtor ascribed his present position to losses on the china business and to illness of himself and wife. The debtor was questioned by Mr. Bowhay (Torrington) for a creditor, and the examination was thereupon closed.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

Chimney Pots, No. 17,645.—R. W. Eddy and W. Jackson. Chimney pots and the like. Aug. 1, 1913.

Colouring Designs Upon Glass, &c., No. 16,161.—J. McLaren Donald. Method of colouring designs upon glass, china, metal and the like. July 14, 1913.

Covers for Toilet Articles, No. 17,140.—I. L. Williamson. Covers for toilet articles and the like. July 26, 1913.

Devices for Use in Connection with Cups, No. 17,333.—G. A. Merchant. Device for use in connection with cups and saucers. July 28, 1913.

Hollow Earthenware, No. 17,489.—E. W. Leigh. Manufacture of hollow or like earthenware. July 30, 1913.

Irrigating Tiles, No. 17,285.—J. A. Wilson. Irrigating tiles. July 28, 1913.

Machine for Blowing Hollow Glassware, No. 16,637.—W. T. Whiteman (Fairmount Glass Works, U.S.). Machine for blowing hollow glassware. July 19, 1913.

Muffle Furnaces for Enamelled Ware, No. 17,274.—O. Zahn. Method of and muffle furnaces for firing enamelled or other ware. July 28, 1913.

Ovens for Tiles, &c., No. 17,101.—C. Dressler. Ovens suitable for use in the manufacture of tiles, bricks pottery and analogous ware and for other purposes. July 25, 1913.

Porcelain Articles, No. 16,396.—J. A. Jeffrey. Manufacture of porcelain articles. July 16. 1913.

Preparing Clay for Pottery, No. 17,822.—W. W. Hewitt. Preparing clay and the like for pottery and other manufactures. Aug. 5, 1913.

Shaping Pottery, No. 16,851.—C. J. Bolton. Shaping pottery. July 22, 1913.

Sinks, Washing Basins, &c., No. 16,277.—C. H. Clayton and F. G. Jones. Sinks, washing basins and the like. July 15, 1913.

Tiles, No. 17,204.—H. Wade. (American Perfectile Co., U.S.) Tiles. July 26, 1913.

Specifications Published.

1911.

17,050.—Davies. Vases, flower-pots, and the like.
16,169.—Baillie. Apparatus for drawing glass cylinders.
19,085-6.—Stutz. Manufacture of glass articles.
27,744.—Paulwels. Flowerpot for cultivating orchids.
19,468.—Moorcroft & Clarke. Tile presses.
17,199.—Gibbs. Means for use in decorating the surfaces of glass, china, metal and the like.
17,378.—Gibbs. Decoration of glass and glassware.

1912.

13,992.—Demongeot. Manufacture of articles of glass and the like.
19,109.—Gibbs. Means for use in decorating the surfaces of glass, china, metal and the like.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

620,797.—Gillard & Co., Ltd. The Vintry Works, Walthamstow, N.E.
620,799.—Stevens & Williams, Ltd., Brierley Hill.
621,112.—H. O. Turner, 42, Ingleby-street, Birmingham.
621,565.—Keeling & Walker, Stoke-on-Trent.

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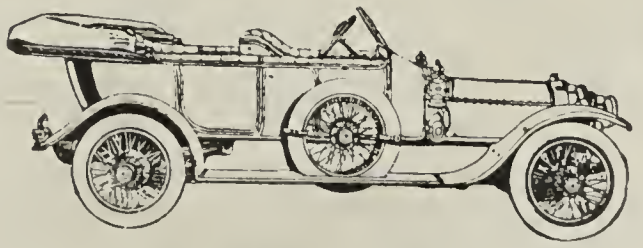
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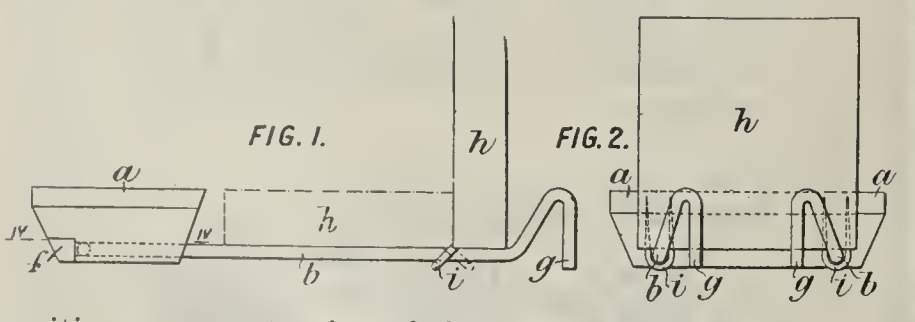
621,568.—Doulton & Co., Ltd., Nile-st., Burslem.
621,652.—Richardson & Co., Nelson-st., Manchester.
621,819.—Miss A. Christie, 12, Crescent-gardens, S.W.
620,579.—J. Dowell & Sons, Ltd., Chatsworth-rd., N.E.
621,108-11.—Mintons, Ltd., Stoke-on-Trent.
621,236.—H. E. Clerk, 66, Kensington Gardens-square, W.
621,274.—T. A. Simpson & Co., Ltd., Burslem.
621,322-27 and 621,330-38.—J. A. Robinson & Sons, Ltd., Wolfe-st., Stoke-on-Trent.
621,564.—J. Kirkham, 14, Wilmington-sq., W.C.
621,867.—Doulton & Co., Ltd., Nile-st., Burslem.
621,975.—Grimwades, Ltd., Stoke-on-Trent.
622,027.—W. T. Copeland & Sons, Stoke-on-Trent.
620,198-201.—The Benjamin Electric, Ltd., 1a, Rosebery-avenue, E.C.
620,779.—Bradbury & Co., Ltd., 39-40, Woodcock-st., Birmingham.
621,043.—Madame B. Tisserand, 7, Avenue Victor Hugo, Paris, France. Address for service, c/o Lloyds, Wise & Co., 10, New-court, Lincoln's Inn, W.C.
621,120.—O. A. Pfeifer, 6, Dyer's-buildings, Holborn, E.C.
621,881.—W. J. Mitchell, 6, Holborn-viaduct, E.C.
622,406 and 622,474-6.—W. H. Goss, Stoke-on-Trent.
622,624 and 622,805.—S. Fielding & Co., Ltd., Devon Pottery, Stoke-on-Trent.
622,813.—W. J. Bush & Co., Ltd., Ash-grove, N.E.
622,890.—Burgess & Leigh, Middleport Pottery, Burslem.
621,500-1.—J. Maddock & Sons, Ltd., Newcastle-st. Pottery, Burslem.
622,407-8.—W. H. Goss, Falcon Pottery, Stoke-on-Trent.
622,477.—G. L. Gent & Son, 4 and 5, Holborn-circus, E.C.

Latest Complete Specifications.

Glass Mosaics for Walls and Floors.—A. Deprit, of Calle Berastegni No. 2, Bilbao, Spain, claims :—Glass mosaic work for covering walls and floors, and for other similar purposes, characterised by the fact that pieces of glass, plate glass or crystal are painted or enamelled on one of their faces, then assembled to form the mosaic with the painted or enamelled face placed inwards or downwards, and fixed by means of plaster cement or the like.

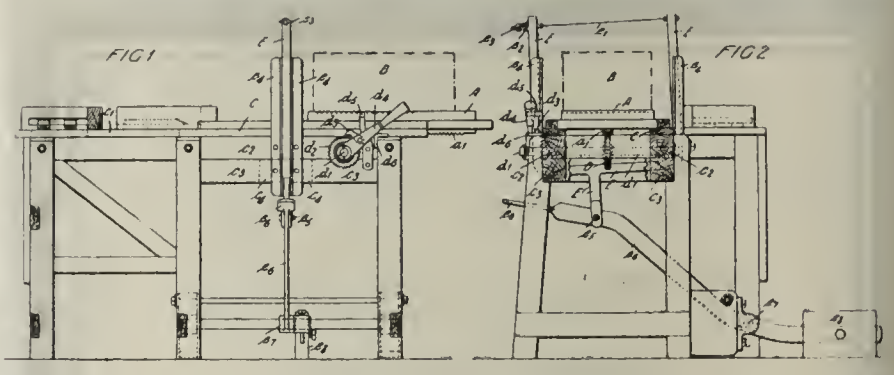


Stands for Displaying Ewers and Basins, &c.—J. Sayer, of No. 214, The Rye, East Dulwich, claims :—(1) A stand for the display of an ewer and basin or for other china ware, earthenware, glass ware or other objects consisting of a platform, a bracket or framework fixed thereto, and a support pivoted and connected to the bracket so as to be adapted to be used in the raised position as a support at varying distances from the platform or in the recumbent position as an extension of the platform. (2) A stand as claimed in claim (1) in which the bracket consists of two wires with bent ends to hook into sockets on the wall or elsewhere. (3) A stand as claimed in claim (1) in which the support is provided with projections or recesses arranged one behind the other for the display of a plate or plates, and the like, in a more or less upright position. (4) A stand as claimed in claim (3) in which the support is made in two parts, the main portion connected to the bracket, and the other part having the projections, or recesses or both thereon detachable from the main portion. (5) A stand as claimed in claim (1) provided with a detachable table. (6) A stand as claimed in claim (1) provided with a detachable table connected to the platform. (7) A stand as claimed in claim (1) provided with a detachable table connected to the support. (8) A stand as claimed in claim (1) provided with a detachable table made in steps or with stages of different heights. (9) A stand as claimed in claim (1) or claim (4) provided with means for the attachment of brackets or trays to display small articles. (10) A stand as claimed in claim (1) or claim (9) in which the platform is made in two parts, the main portion rigidly connected to the bracket, while the upper portion, having means for the attachment of brackets or the like, is detachable. (11) The construction of stand consisting of a wooden block, a wire bracket fixed to the block and having hooked ends, and a support connected to the wires, so as to slide thereon, but to be locked when put in the erect position and pressed against the wire.



Uniting Glass, Porcelain, &c., to Metal.—A. Spichtin, 211, Hegenheimerstrasse, and R. Knoebel, 40, Hirschgasse, both of Basel, Switzerland, claim :—A method of and means for uniting adhesively glass, porcelain, stoneware and the like with similar materials or with articles made of metal, characterised in that a metal alloy, consisting of 666 parts of weight of lead, 333 parts by weight of chemically pure tin, and 200 parts by weight of bismuth, is applied in a fluid state to the faces of the articles to be united.

Apparatus for Manufacturing Tiles.—J. Heaton, of the Ravenhead Sanitary Pipe and Brick Co., Ltd., of St. Helens, claims :—(1) The improved mode of manufacturing tiles which consists in cutting extruded clay, having a cross-section, the dimensions of which correspond with the length and width of the tile, into layers, and then shaping each such layer between plates adapted to form the nibs, and to punch the holes. (2) The improved machine for manufacturing tiles according to the method claimed in claim 1, which comprises a travelling table to carry the extruded clay, means for advancing the table step by step, means for cutting off layers of the clay to form tiles, and means for moulding the nibs, and for holing the tiles. (3) The improved machine for manufacturing tiles according to the method claimed in claim (1), which comprises a travelling table to carry the extruded clay, means for advancing the table step by step, means comprising a loosely supported wire adapted to give a slicing cut for cutting off layers of the clay to form tiles, and means for moulding the nibs, and for holing the tiles. (4) In the improved apparatus as claimed in claim (2), a cutting-off device consisting of a "U" shaped frame guided in a vertical plane and operated so that it oscillates in said plane as the wire cuts the tile off the clay. (5) In an improved apparatus as claimed in claim (2) or in claim (3), the moulding and holing devices consisting of front and rear plates, the former having punches to form the holes, and the latter having dies to form the nibs, said plates being used in combination with tracks to press the clay into the dies and a knife to cut off the surplus clay.



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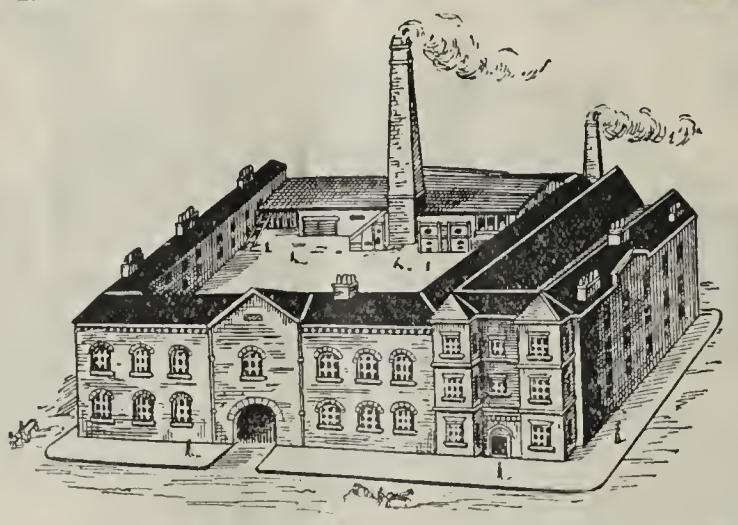
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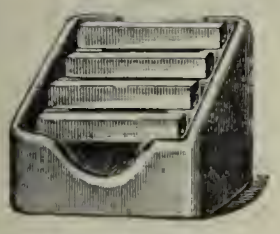
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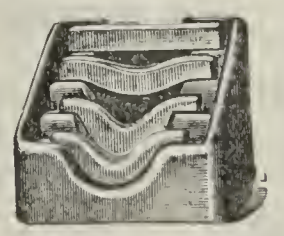
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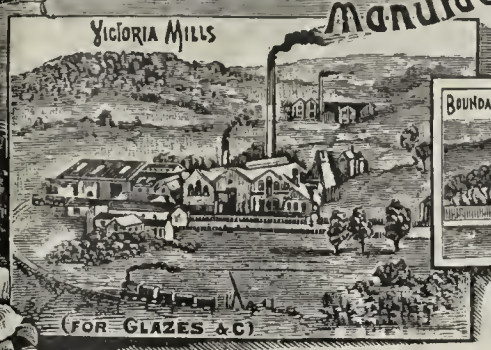
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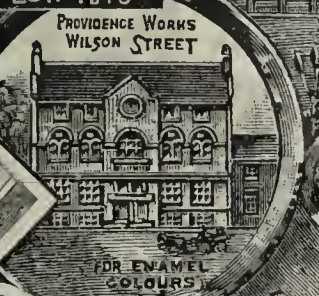






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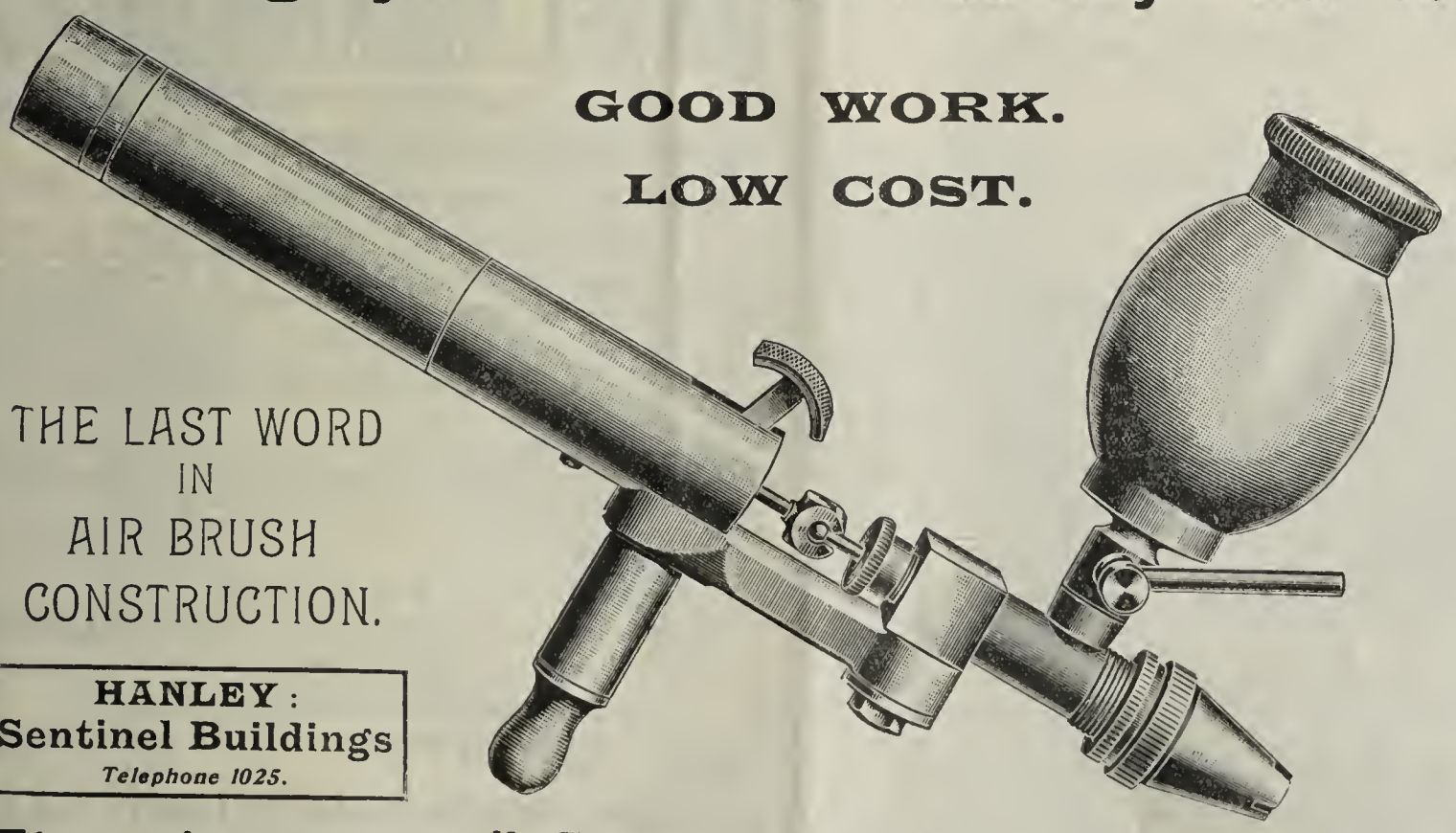
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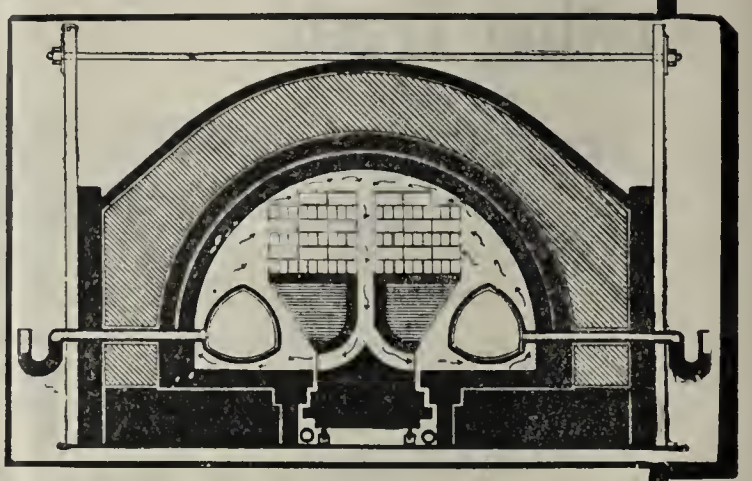
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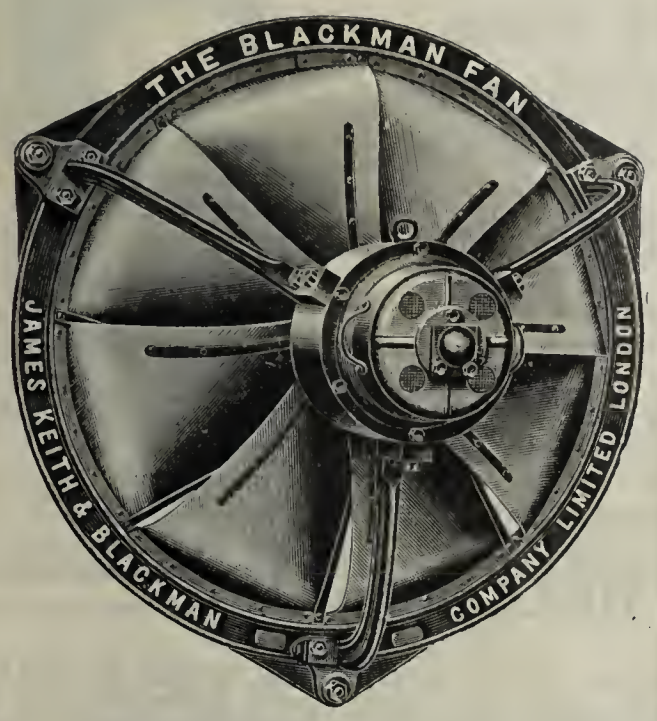
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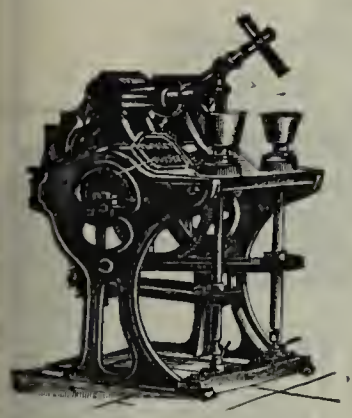
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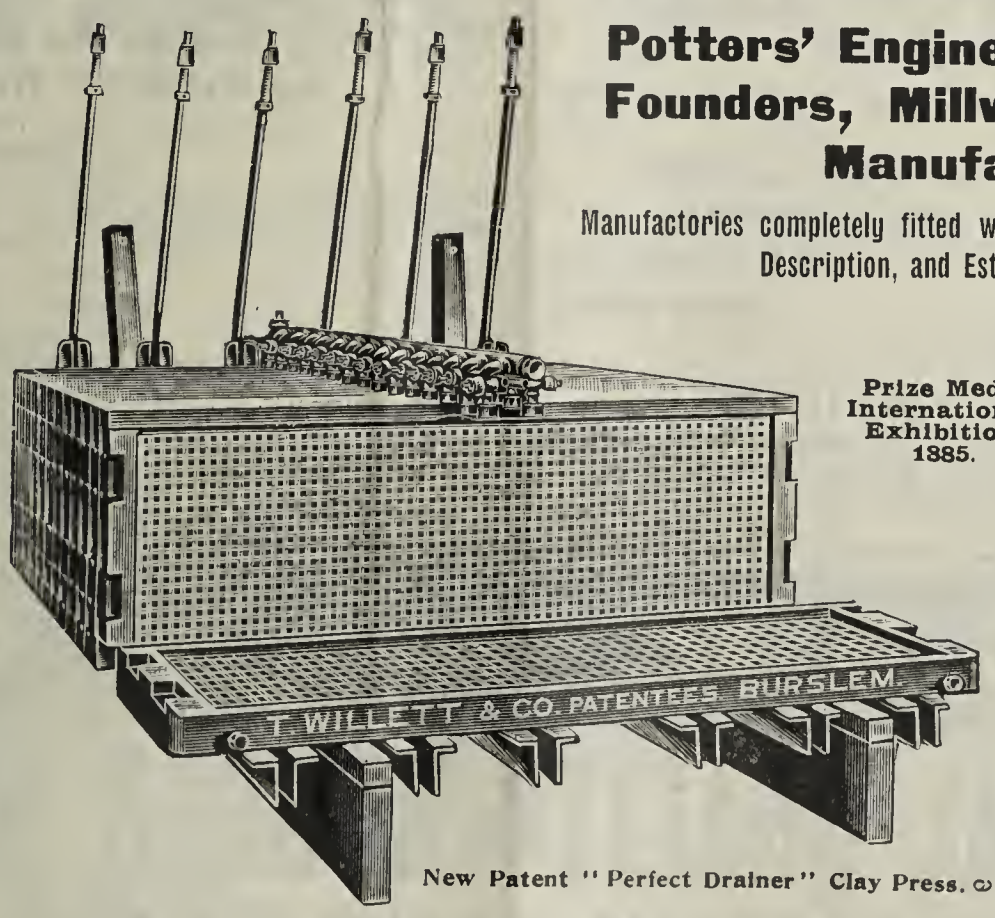
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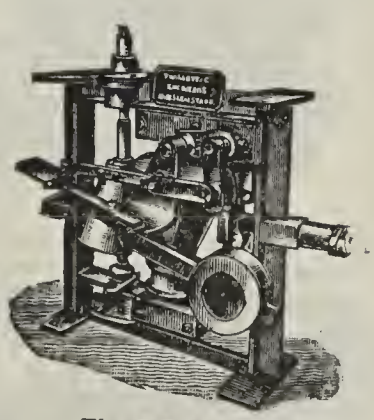


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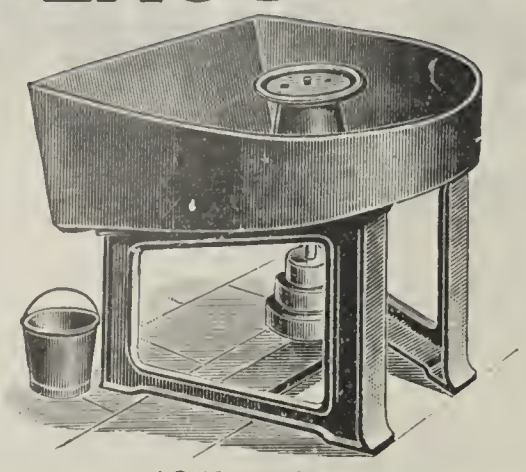
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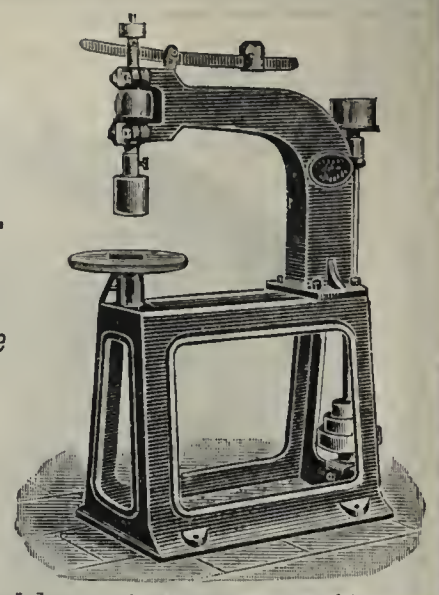
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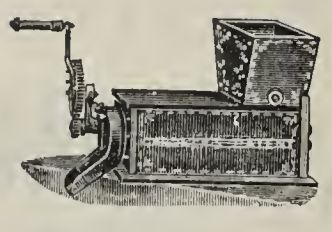
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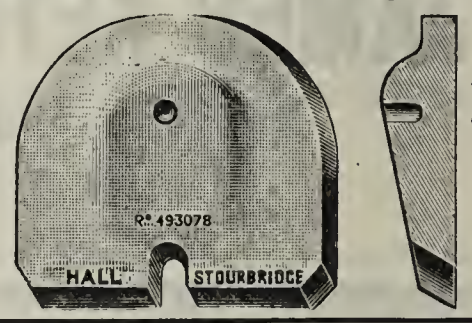


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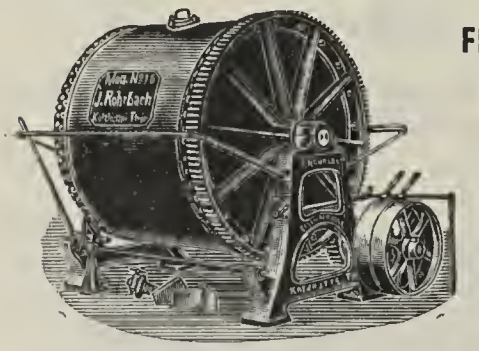
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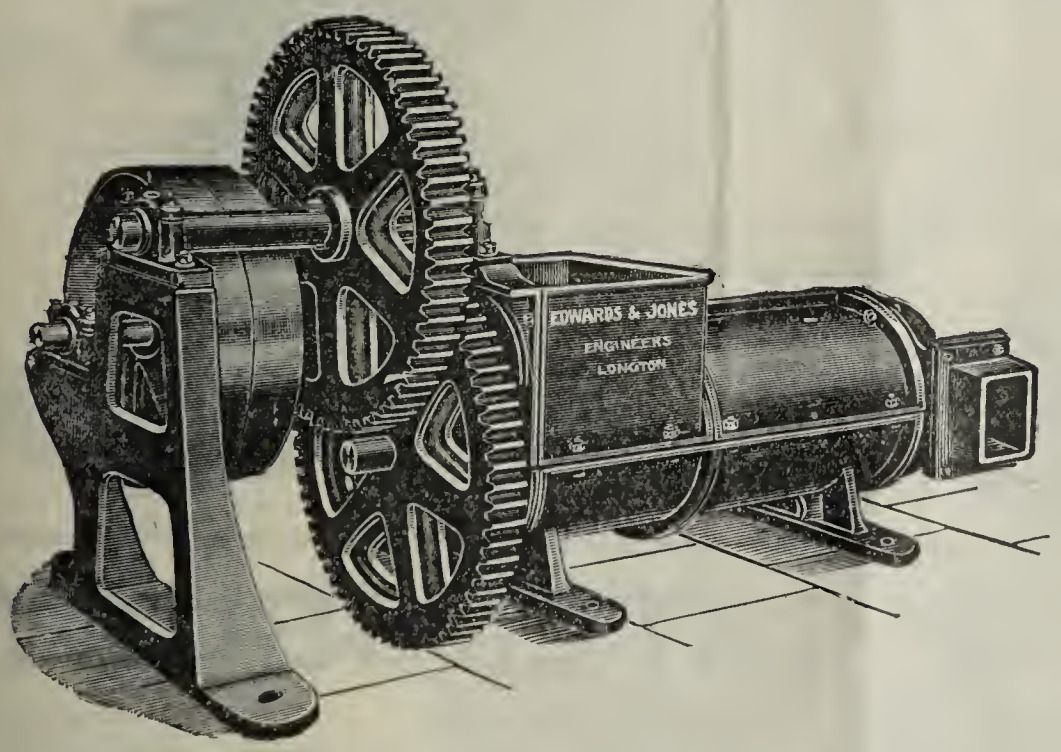
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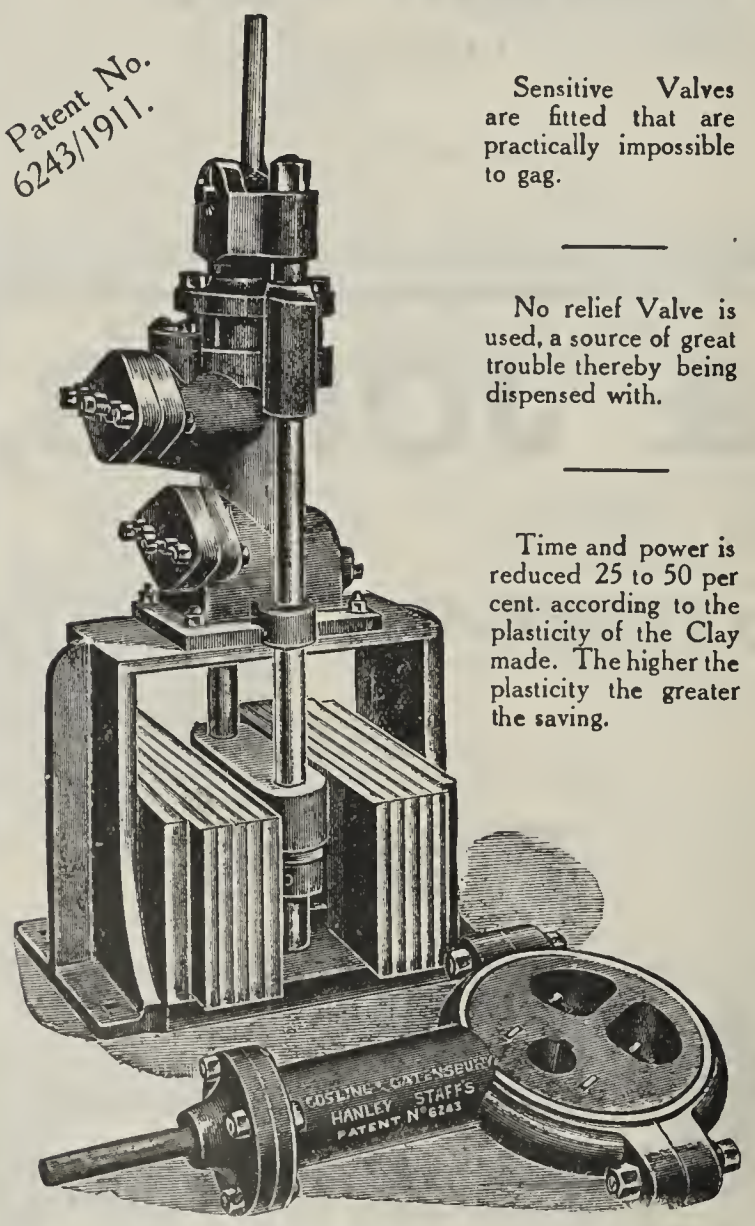
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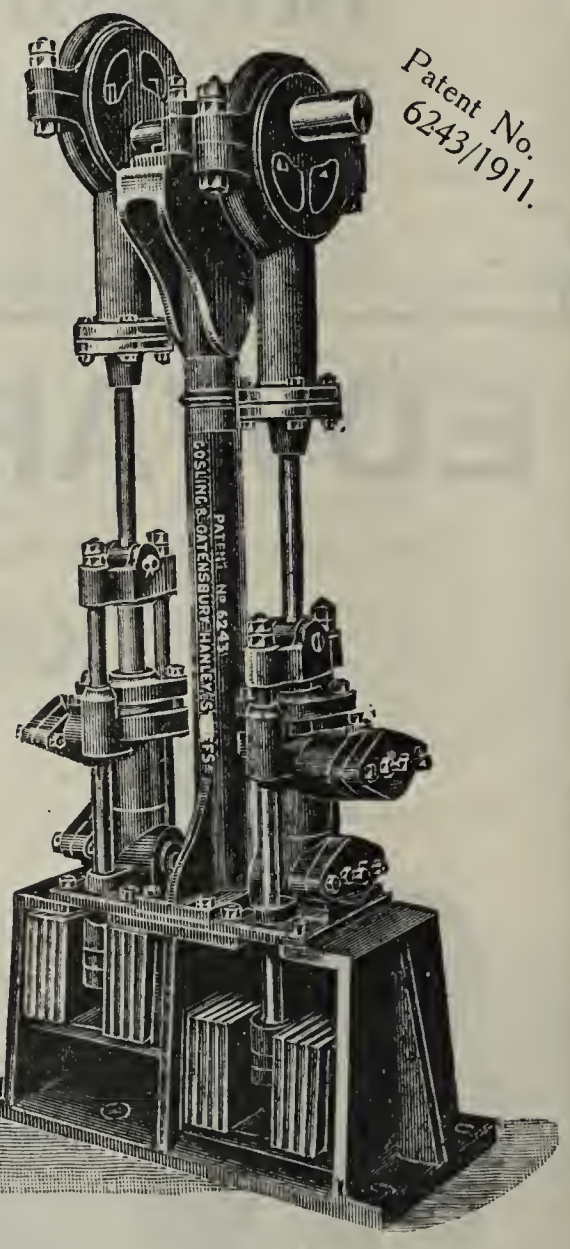
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(CONTINUED ON PAGE 1104.)

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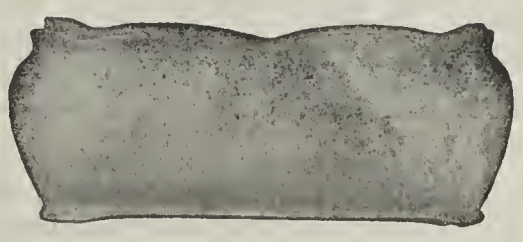
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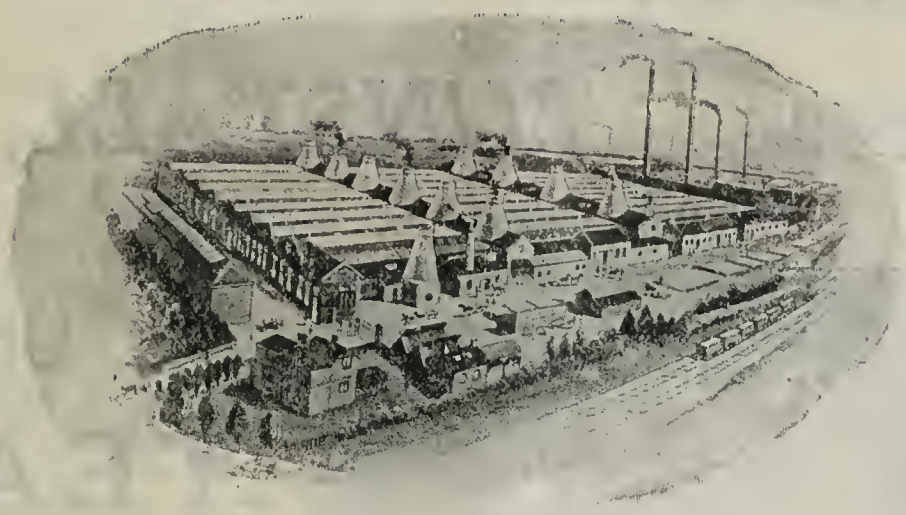
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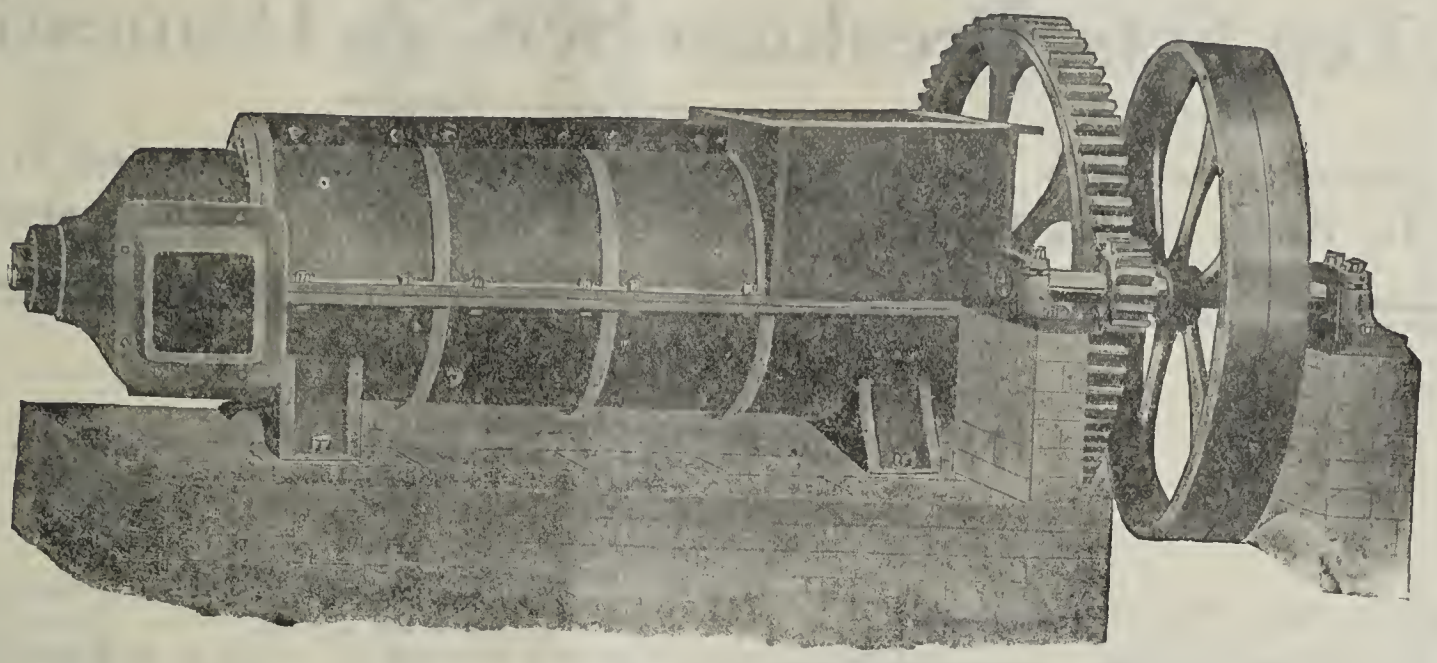
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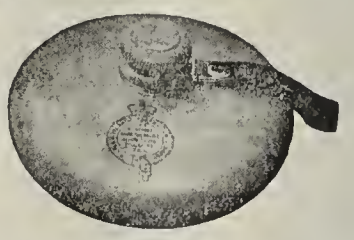
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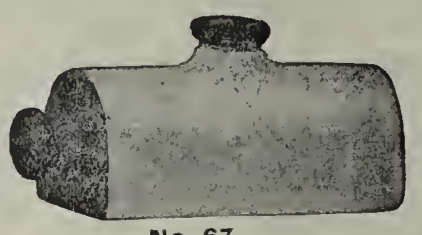
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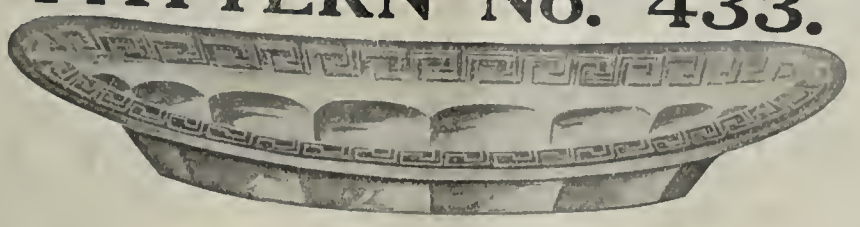
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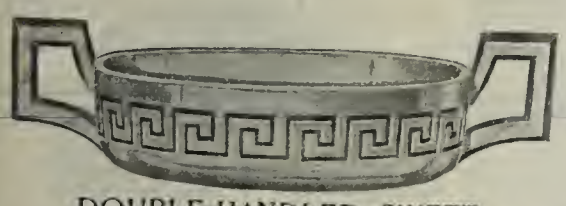
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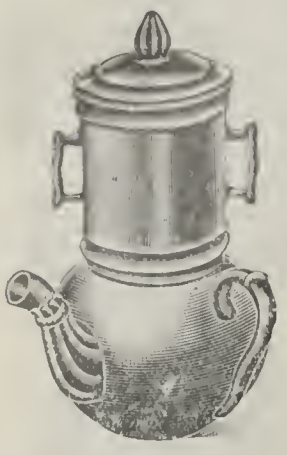
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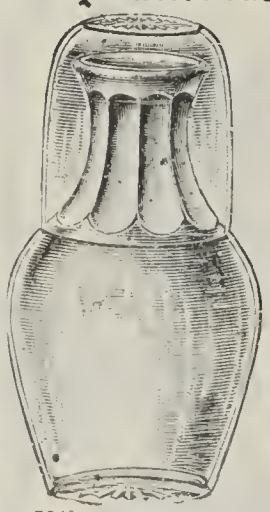
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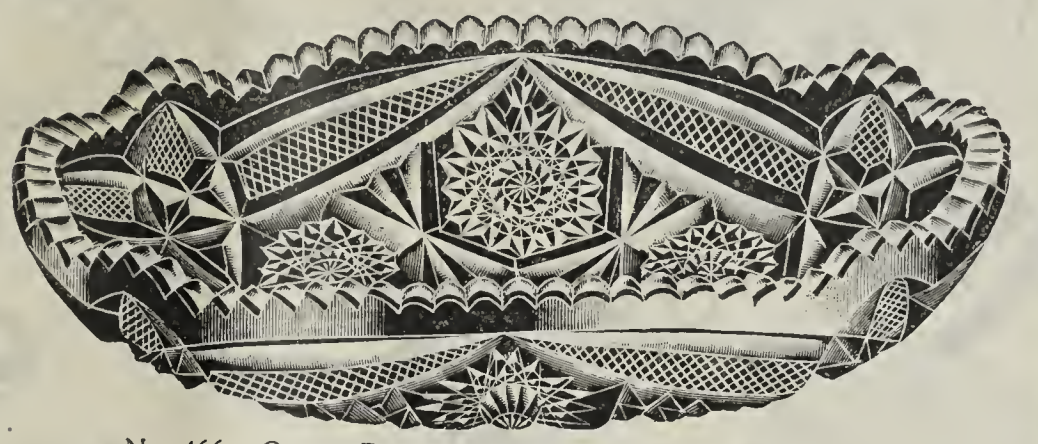
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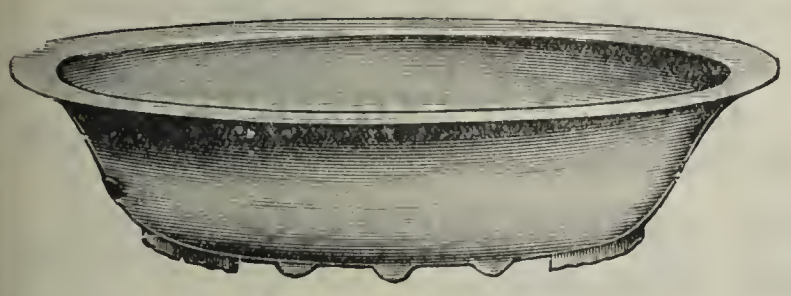
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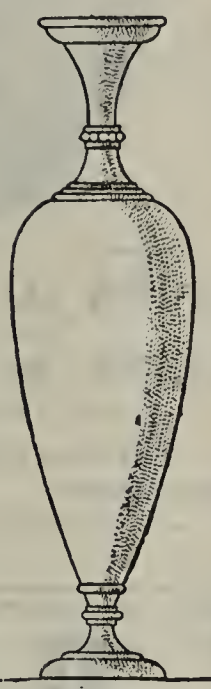


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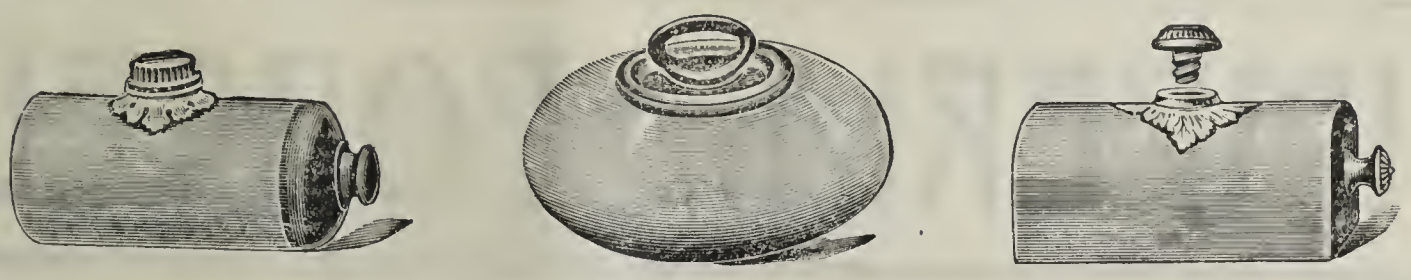
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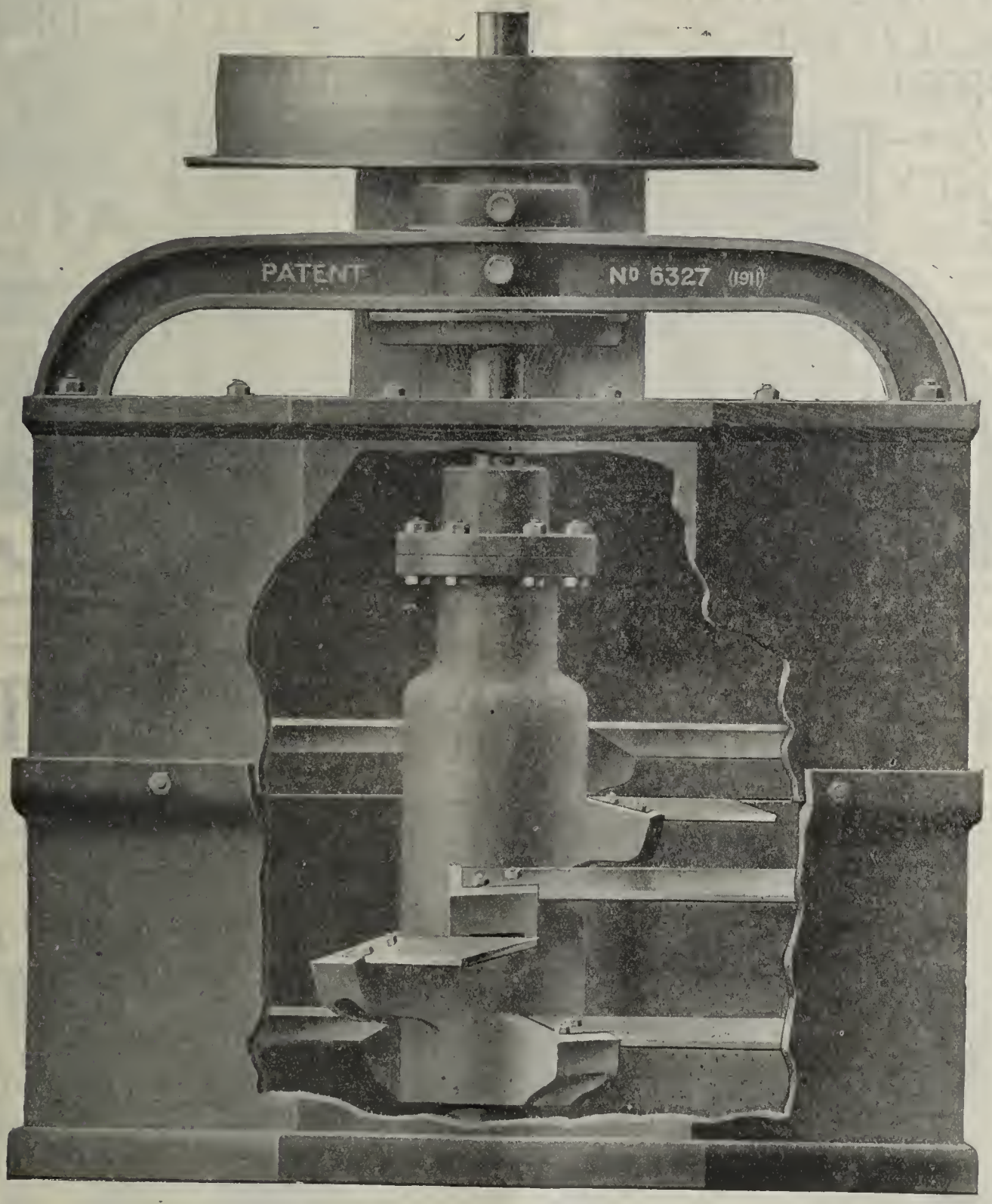
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Editorial Notes.

THE UTILITY OF POTTERY MARKS.

IN carrying out an extensive revision of the list of Trade Marks for our 1914 Diary one or two thoughts have occurred to us which we believe to be worthy of consideration by our readers. Such marks are so extremely useful that we strongly wish that they were more generally employed. We would not go so far as to suggest that the marking of all pottery with the makers' name should be made legally compulsory, as was in fact once the case with regard to French porcelain; but on the grounds of their real utility to the trade we would urge manufacturers to affix them wherever practicable.

For one thing, the ready identification of ware by means of the marks is a great help to the dealer in obtaining orders for matchings and for articles and suites which a customer may have seen elsewhere and admired without having been able to inquire the maker's name. In the case of the many excellent reproductions of old styles now being put on the market the mark on the bottom is almost the only safeguard against the innocent or fraudulent deception of the connoisseurs of future ages. We remember reading a half humorous complaint on this score in one of the books of the late M. Solon. Again, for manufacturers of superior wares there is surely no better protection from cheap imitations of their goods than the regular use of a registered trade mark, the infringement of which is punishable by law.

A NEW PRIZE COMPETITION.

SOME little time has elapsed since we exercised our ingenuity in the devising of Prize Competitions for our readers, but we now make a novel offer, which we hope will meet with a hearty response. We undertake to give two prizes to the value of £3 3s. each, subject to the conditions specified below, for the best description of—

(1) The Ideal Manufacturer, by a dealer (wholesale or retail).

(2) The Ideal Dealer, by a manufacturer (or manufacturer's agent).

CONDITIONS.—The competitors must be subscribers to or advertisers in THE POTTERY GAZETTE. The descriptions must contain no direct reference to any individual person.

The descriptions must reach us not later than first post on Nov. 12.

The judges will be the Editors of THE POTTERY GAZETTE, and their decision on all points shall be final.

The Editors are to be at liberty to publish the whole or part of any contribution, whether successful or not, in THE POTTERY GAZETTE.

We hope to announce the result of this competition in our December issue, and trust that, by showing each section what is expected by the other, it will exercise a beneficial influence on both sellers and buyers in the pottery and glass trades.

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ILLUSTRATED CATALOGUES are not issued, but Buyers are invited to inspect the large displays of Samples in the Pattern Rooms at

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and at the American and Colonial Agencies mentioned above.

POTTERY EXPORTS IN AUGUST.

FOR the first time since the coal strike the month's exports show a decrease on the corresponding period of the preceding year. The exports in August were of the value of £291,628, as against £300,319 in the same month of last year, and £245,432 in 1911. The flatness of trade during July and August is reflected in this decrease, but at the same time the figure is better than might have been expected. As a matter of fact, £291,628 is about up to the average of the past eight months; and, furthermore, the month of comparison—August, 1912—was above the average, because the factories were then working at more than the customary rate of production for the time of the year, in order to make up for the coal strike losses. The worst feature of the month's business is the falling off in the Canadian turnover, which amounted to £41,796 only, compared with £58,230 in August of last year, and £46,468 in the same month of two years ago. Almost as much business was done with the United States, the shipments to which country showed an improvement, the value being £41,609, as against £39,444 in the same month of 1912. The South American trade was also on a better level, totalling up to £24,806 in the case of Brazil and £29,319 in the case of the Argentine, the respective figures for the same period of last year being £20,297 and £22,107. The British East Indian exports, amounting to £23,464, were rather better than in the preceding month and over £10,000 better than in the corresponding month of 1912. On the other hand, the Australian business, though rather better than in July, was not so good as it was a year ago. The figure for August was £30,116—more than £3,000 less than in August, 1912. New Zealand took goods to the amount of £11,667, a few hundreds better than in the corresponding period. The Continental trade was bad during August, the shipments to France and Germany being roughly £4,000 below those of the same month of last year. "Other countries" also showed a decline approaching £10,000. Referring to descriptions of exports, the only marked increase was in regard to china, the August exports being £23,580, as against £15,523 in the same month a year ago.

The eight months' shipments aggregated £2,294,910, compared with £1,933,531 in the corresponding period of 1912, and £1,960,475 in the first eight months of 1911.

The imports for August were £83,077, a big decrease on the preceding August, when the figure was £110,669, though for the same month of 1911 the value was only £72,390. For the eight months the imports totalled up to £692,518, as against £649,232 in 1912, and £653,663 in 1911.

WORKMEN'S COMPENSATION IN 1912.

STATISTICS of compensation and of proceedings under the Workmen's Compensation Act and Employers' Liability Act during the year 1912 were published as a Blue-Book at the end of September.

Returns were received from the seven great groups of industries—mines, quarries, railways, factories, harbours and docks, constructional works, and shipping—in which the aggregate number of person employed coming within the provisions of the Act was nearly 7½ millions, the number of employers being 136,279. During the year compensation was paid in 3,599 cases of death, as compared with 4,021 in 1911, the year of the Hulton Colliery disaster, and 3,510 in 1910. In 1912 there were 424,406 cases of disablement, as against 419,031 in 1911, and 378,340 in 1910. The average payment in case of death in 1912 was £158, and in case of disablement £6 3s. The annual charge for compensation averaged 8s. 7d. per person employed. It was lowest in the case of persons employed in factories, being only 5s. per person. In the case of railways it was 8s. 2d.; it rose to 11s. 3d. in the case of quarries, to 15s. 9d. in the case of shipping, and to 11s. 7d. in the case of constructional work.

The total amount of compensation paid under the Act in the seven groups of industries during the year was £3,174,101, as compared with £3,056,404 in 1911. In 1908 the total was £2,080,672. The increase is almost all due to disablement cases, and is attributed to the active state of the industries, and also in part to workmen now lying up (legitimately) for injuries when previously they would have kept on with their work as best they could. In the following comparative figures for the china and earthenware industries N indicates the number of persons employed, T the total compensation paid, and C the charge per person employed:—1909, N 69,146, T £10,527, C 3s. 0½d.; 1910, N 69,995, T 10,660, C 3s. 0½d.; 1911, N 69,346, T 12,675, C 3s. 8d.; 1912, N 72,834, T 14,860, C 4s. 1d.

Compensation was paid in 1912 in the seven groups of industries in 55 cases of death from disease, and in 6,712 cases of disablement. The bulk of these cases, 87·9 per cent. of the total, occurred in the mining industry. Of the remainder 606 were cases of lead poisoning, of which 192 were continued from the previous year. 203 of the new cases and 56 of the continued cases were in the engineering and metal groups of industries; and 71 of the new cases and 84 of the continued cases were in the china and earthenware industry. Returns are not obtained for the house painting industry, but 150 certificates for disablement by lead poisoning were given by certifying surgeons to workmen in this occupation.

The total number of cases under the Workmen's Compensation Act which were taken into Court in 1912 was 10,972; many of these, however, were applications for dealing with allowances that had already been granted, and many were settled out of Court or otherwise disposed of, so that the total number of original claims for compensation finally settled within the cognisance of the Courts was only 5,858, the decision being in favour of the workman in 4,455, or 76 per cent. The total number of cases under the Employers' Liability Act, 1880, taken into Court in the whole of the United Kingdom, which was 604 in 1907, has steadily declined to 197 in 1912, action being now more generally taken under the Workmen's Compensation Act.

Backing Varnish for Mirrors.—(1) Venice turpentine 4 parts melted over a fire and heated along with 8 parts of finest orange shellac until the mass is homogeneous. When cooled, 32 parts of strong spirit of wine are gradually incorporated by stirring, the mixture being finally strained through a linen cloth. (2) Sandarach 3 parts, shellac 2, and mastic 6 parts are crushed and dissolved in 49 parts of spirit. After adding 3 parts of Venice turpentine the mass is gently warmed, and left to stand for 48 hours, the supernatant liquid being poured off and filtered.



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EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are given in the "Board of Trade Labour Gazette":—

POTTERY TRADES.— Employment was fairly good, on the whole, but showed some decline compared with a month ago. Returns from firms employing 17,853 workpeople in the week ended August 23 showed a decrease of 0·2 per cent. in the number employed, and of 2·6 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 2·7 per cent. in the number employed, and of 2·0 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	3,264	£3,800
Earthenware manufacture ...	12,126	11,448
Other branches (including unspecified)	2,463	2,371
Total	17,853	£17,619

Districts.	Number employed.	Wages paid.
Potteries	13,538	£12,700
Other districts...	4,315	4,919
Total	17,853	£17,619

Employment showed a further slight decline in the china section, but was still much better than a year ago. In the earthenware section employment was fairly good, but not so good as a month ago, in the Potteries district; in other districts it was good, and better than a month ago.

GLASS TRADES.—Employment was fairly good, but not so good, on the whole, as a month ago. Compared with a year ago, it showed a decline in the bottle trade, and an improvement in other branches. Returns from firms employing 8,314 workpeople in the week ended August 23 showed a decrease of 0·4 per cent. in the number employed, and of 2·0 per cent. in the amount of wages paid, compared with a month ago. Compared with a year ago, there was an increase of 0·1 per cent. in the number employed, but a decrease of 3·2 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,827	£7,622
Flint glassware (not bottles) ...	1,843	2,172
Other branches...	644	748
Total	8,314	£10,542

Districts.	Number employed.	Wages paid.
North of England	808	£977
Yorkshire	4,523	6,106
Lancashire	995	1,129
Worcestershire & Warwickshire	1,060	1,300
Scotland	621	722
Other parts of United Kingdom	307	308
Total	8,314	£10,542

Employment in the glass bottle trade was fair in Yorkshire, and not so good as a month ago; at Mexborough it continued bad. It continued moderate at St. Helens, where some short time was reported. Some short time was also worked on the Wear. At Glasgow employment was good, and better than a month ago. It continued good at Bristol, Portobello, and Dublin, and fair at Seaham Harbour. Employment was moderate with sheet glass flatteners and good with sheet and plate glass workers at St. Helens. It continued good with flint glass makers and cutters at Birmingham, and in the Wordsley and Stourbridge district, though not so good as a month ago with cutters in the latter district. Plate glass bevellers and silverers at Birmingham were well employed. With pressed glass makers on the Tyne and Wear employment was fair, and, at Gateshead, was somewhat better than a month ago.

THE ART AND CRAFT OF THE POTTER.

(FROM OUR POTTERIES CORRESPONDENT.)

A LECTURE of a particularly able, thoughtful, and inspiring character, on the subject of art instruction in relation to the craft of the potter, was delivered at the Stoke Town Hall on Sept. 17 by Mr. Gordon M. Forsyth, A.R.C.A., art director of Pilkington's Tile and Pottery Co., Ltd., Manchester. The discourse was chiefly directed to the students of the Potteries Art Schools, who were present in large numbers, as well as others interested in art education and the pottery industry. The gathering was presided over by Ald. P. Elliott (Chairman of the Stoke-on-Trent Education Committee), who referred to the reorganisation of the local art schools, and expressed the Committee's desire to give every facility for the training of the young people connected with the potting trade.

Mr. Forsyth divided his lecture into two parts, dealing in the first with the ideal school of art, and in the second with the art and craft of the potter in relation to the great styles. At the outset he asked the students to realise they were the artists of the future.

"You have," he said, "been specially chosen by Providence to fulfil a most sacred trust—the holding up of the lamp of truth of your day and generation. Only a few short years, and it will be in your hands. All through the ages that lamp has burned, but with varying brilliance. Never has it gone out, though it has been dimmed at times by ignorance, cruelty, oppression, and injustice. Never can it be put out while life lasts, for art is a necessity of life. Without art there can be no life; in mankind life and art are inextricably interwoven and inseparable. Art is the embodiment of the spiritual aspirations of life. I want you to realise the greatness and the nobility of your work, and that it is the inner self that requires cultivation, for art is the expression of the inner self."

Having made this high appeal, the lecturer showed how art had been crushed under the heel of science in the matter of education. The words "science and art" were used together as things alike, but science was an exact thing and measurable, while art was a spiritual and immeasurable thing.

Dealing with art training, he urged that it could not begin too early, and that children ought to be taken more to picture galleries and into the country surrounding the towns. There were three essentials to the making of an artist—the study of the great masters, not making a fetish of old work but studying the spirit of the work and the times that produced it; a constant reference to Nature; and a keen study of the movements of our own times. In an art school the earlier years ought to be devoted to a definite method of work, in order that the student might gain a thorough command of his materials. Then he should receive personal and individual study and direction from the master along the lines his abilities and temperament suggested. Mr. Forsyth had something pertinent to say on the subject of teachers. The headmaster should be a man of distinction and achievement in the art world—not a callow youth who had rushed through his four five-month courses at South Kensington, capped, gowned, and guaranteed a full Associate of the Royal College of Art. No, nor one who had lost his hair burning the midnight oil over horrible certificate works. He wanted a man with his pedigree

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written in actual work, supported by a staff of specialists, preferably belonging to the particular district. The assistants, too, must have their certificates written in the actual craft they intended to teach.

"The art and craft of the potter," said Mr. Forsyth, coming to the second part of his lecture, "is the greatest of all the minor crafts, not only on account of it being a necessity of primitive mankind and that the first artist was a worker in clay, but also on account of the imperishable nature of pottery. Because of that great lasting quality we can read the birth, the life, and death of art in various peoples more suggestive and readable than the finest history ever penned." It was, moreover, complete in itself, more independent of the mother of crafts—architecture—than any other, such as stained glass, wall decoration, furniture, carpets, and weaving, all of which had to conform, or should conform, to the spaces allotted and planned by the architect. They would notice, if they were careful students of pottery, the extraordinary similarity in style of the work produced by the early potters in any of the great artistic styles or nationalities—a great deal due to the limitations of their materials, but also, in a much greater degree, due to the love and veneration of it as a means of artistic expression. There was something about the early work of such great styles as Egyptian, Assyrian, Chinese, Greek, Roman, Italian, Persian, and Hispano-Moresque, which put even their later and more developed phases to shame.

Coming to the design and production of pottery, the lecturer said paper drawings were quite unnecessary—they were harmful—in the production of artistic pottery. The artist should throw his own pots, and from the beginning they should be completely his own. Under trade conditions that was almost impossible, but in a school of art it was possible, and was the only way in which their work would be invested with life. That was what was wanted to-day in English pottery, and they could get it if they had the brains to recognise it. To-day many people thought if a thing were rough, clumsy in shape, bungled and blotched in decoration, and dirty green in colour, it must be artistic. It passed comprehension, but it was so. He did not believe in that glorification of amateurism that was running through every branch of art in this country, that was rampant at every arts and crafts exhibition, and a great deal of the blame lay at the door of their art schools. True craftsmanship consisted in full and complete mastery over their materials, wedded to a love for their craft, loving it not only for the power of artistic expression it possessed, but also for its limitations. The true craftsman was never ostentatious, and the work of his hands was frank and fair in colour and statement. He was a lover of life and of all beautiful work of the past in his own or any other craft.

"No one can work at a craft like that of the potter for any length of time," Mr. Forsyth observed, "without discovering something, and I want to tell you what I have discovered—a discovery that it is only possible for a pottery craftsman to make—and it is this: that all the great styles of applied art have been built up in exactly the same way. However widely divergent in effect their ultimate development became, they were built up on exactly the same lines. There is no doubt at all that the Egyptian influenced the Greek, that the Greek and Assyrian influenced the Chinese, that the Chinese influenced the Persian, and so on; but I ask you to notice that the influence was an influence only, and afterwards became swallowed up in their own distinctive styles. Such influences were only natural, and were perfectly legitimate and wholesome when they tended only to develop the work of the respective countries. That is wholly different to the complete obliteration of national characteristics in British pottery of the eighteenth century by the blind copying of classic and Chinese art. We had little or no art tradition at that time, and the onset of science, which made such tremendous strides in Wedgwood's time, left us artistically bankrupt. We copied classic and Chinese art without understanding, and English art was killed dead as a door nail when we should have assimilated those influences only. To-day we are beginning to recover from the shock, and a great deal of hard and earnest work has to be done before we can gather up the threads we so carelessly abandoned. If we are destined to have a great artistic tradition in British pottery, it is still in front of us, and will only be arrived at by the teaching of sound principles and the love of our craft for its own sake. Here in the Potteries it has to be done, and here it can be done; and it is you that are to do it."

Finally, he wished to leave with them the message of the greatest artist who ever lived, Leonardo da Vinci:—"When a work satisfies a man's judgment it is a bad sign, and when a work surpasses his expectation, and he wonders that he has achieved so much, it is worse. But when an artist's aim goes beyond his work, that it is a good sign, and if the man is young, he will no doubt become a great artist. He will compose few works, but they will be such that men will wonder at their perfection."

LIQUEFACTION OF CLAY BY ALKALI.

(SPECIALLY TRANSLATED.)

BÖTTCHER, who investigated this influence in connection with the preparation of slip body for casting, found that the liquefaction and suspension phenomena depend on the quantity and kind of akali used. The hydroxides of sodium, lithium, potassium and calcium, and the carbonates of sodium, lithium, and potassium act only within certain relatively narrow limits of concentration, their influence being of an adverse character when these limits are exceeded. Ammonia forms the sole exception among alkalis, giving satisfactory liquefaction and stable suspension irrespective of the concentration employed. The hydroxides and carbonates differ in so far that 5 to 6 times as much carbonate as hydroxide is necessary to produce the best effect with a given quantity of clay. Both the hydroxides and carbonates of sodium and lithium are considerably more active than the corresponding potassium compounds, whilst fairly equal themselves.

Simonis worked out the following method of determining the amount of sodium carbonate suitable for adding to a given body to fit it for casting. Six samples, of 50 grms. each, of the dry body are weighed out into an equal number of 300 c.c. flasks with tight fitting corks, and to each flask is added 50 c.c. of liquid, consisting in the first flask of water only, in the second of 49 c.c of water and 1 c.c. of soda solution (containing 5 grms. of calcined sodium carbonate per litre), in the third of 45 c.c. of water and 5 c.c. of soda solution, and so on. The flasks are well shaken up till the contents are homogeneous, and left for several minutes, with frequent shaking, the attainment of maximum fluidity taking a short time to realise. The degree of fluidity in each sample can easily be recognised by the way it flows when agitated, and by the sound emitted during that operation; and it will soon be evident that the fluidity does not increase beyond a certain point, whatever the proportion of soda present. If this limit be attained in, say, sample 3, another sample is tried midway between this and No. 4, and so on until a very close idea is obtained of the correct amount of soda to be used. If the No. 1 sample be too thick, a larger proportion of liquid (e.g. 60 c.c.) must be taken for all, the opposite course being adopted if No. 1 appears already too thin.—("Sprechsaal.")

BURLEIGH WARE

Manufactured by

BURGESS & LEIGH.

Middleport Pottery,

BURSLEM, Staffs.

Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

Pountney & Co., Ltd., Bristol, are represented in London by Mr. J. J. Adams at 9, Charterhouse-st., E.C., and the range of samples to be seen there at the present time, which the writer has had the pleasure of inspecting, is thoroughly representative of their principal productions; in fact, the collection may well be described as replete. The all-round up-to-dateness of this firm is universally recognised in the trade; every pottery dealer and merchant knows—or by this time should know—that their factory at Bristol is a model one in numerous respects, and it really deserves more than a passing tribute such as I am permitted to give it here, but to say about it all that it merits would need a separate article, and, after all, the reader of these notes would doubtless prefer something tangible in the way of interesting movements with regard to particular productions than have to undergo the infliction of something in the nature of a panegyric. I may, however, be pardoned for making just a little prelude by way of a simile. Undeniably the West has, for obvious reasons, come to be generally regarded as suggestive of progressiveness and modernity, whilst, on the other hand, the East is mainly—I use the word advisedly—reminiscent of the archaic, the antiquated, and the obsolete. I am reminded that Pountney & Co.'s factory is situate in the West of England. The observation bears its own significance. Pountney & Co., Ltd., are one of a certain number of firms who have evidently foreseen the advantages to be derived from specialisation, and whatever line of procedure upon which, after careful consideration, they decide to embark, is pursued for all it is worth, and on the most modern and approved lines. This has unquestionably had much to do with their rapid success. It applies particularly to their staple lines in domestic and utilitarian pottery, to which they have devoted themselves so insistently, and have so cheerfully encouraged and embraced mechanical developments in every manufacturing department, that the Bristol productions of to-day are recognised as presenting a formidable competition in the pottery markets of the world. One thing, at any rate, in all this is apparent: the firm have not allowed themselves to be led away by the obscure and the æsthetic, for there is a practicability and substantiality about their entire productions, and whilst all their decorations are dainty and effective, they are at the same time characterised mainly by modesty and stern reality; in other words, they may be said to compromise between ornamentation and utility. It must, however, be made clear that this statement is entirely mine, and quite unauthorised. Their wares, as far as I know them, are nothing if they are not strictly saleable, and the factory is apparently so designed at every point as to facilitate the production of pottery in bulk. The decorations would appear to undergo a careful selection and abridgment at the works, with the ostensible purpose of rendering possible facilitation of production and despatch. The logical sequel to all this is that they have no "fancy" prices; indeed, some of their "fixings" are quite astonishing, the figures being such as would, presumably, be impossible but for the pursuance of this policy. But to refer more specifically to one or two of their outstanding lines. The firm is making quite a speciality just now of hand-painted toilet ware, which, it is interesting to note, they have the facilities for placing on the market at practically the same prices as printed and "filled in." However nicely "filled in" decorations may be finished, and however perfectly the finely engraved guiding lines may be muffled by the applied enamels, there is usually a bias, on the part of all who know, in favour of spontaneous and unaided brush work, and, this being so, there is little doubt that the firm's venture in this direction will meet with its reward. One of the latest of such patterns is offered on the "Grecian" shape, with a powerful sweet pea design, the colours being bright, definite and telling. In bedroom ware, as in other lines, the company has something to interest all markets, and the styles range from simple shadings and lithographs, in which the "Dundee" shape plays an important part, to reproductions of old Bristol: a peculiarly interesting feature is this revival of ancient Bristol styles in the



NEW DESIGNS: POUNTNEY & CO., LTD. [*Photo. by "The Pottery Gazette."*

The Childrens Party

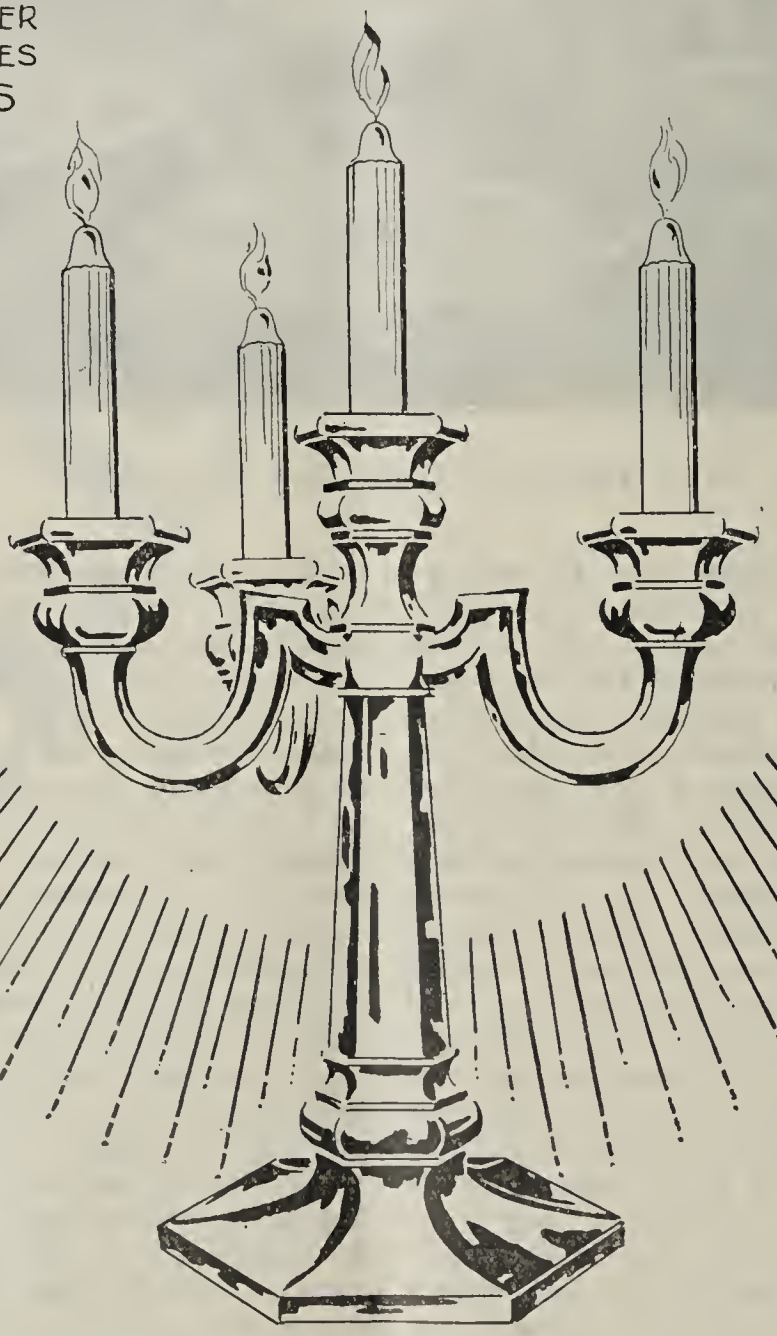
is now incomplete without these charming Little glass Candlesticks placed around the dining table We are confident that a display, together with our single Candlestick (decorated with gold border) will prove popular Lines this Season

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AND BRANCHES

HEIGHT OF HOLDER
WITHOUT CANDLES
FIVE INCHES



Bristol pottery of to-day. In these latter decorations the "Barr" shape is prominently employed, and it is a capital form, eminently suitable for the purposes to which it is put. If I am not mistaken, it is a rejuvenation of a shape originally appearing in the old Mason ironstone; indeed, one of the patterns I saw on show, an old mulberry print—which, by the way, looked extremely fine—is, I believe, a reproduction, in fact, of an original Mason design. In dinner ware the "Bath" decoration, a medallion design, supplied on either plain or gadroon-edged shapes, is a really excellent thing. The "Cromer," a border pattern done on the "Antique" shape, is remarkably and beautifully neat, whilst it is to be had in several colours in plain prints, and also in Japan—blue, brown and gold. The "Weston" design, done on the "Badminton" shape, is an all-over floral pattern of distinct merit, and it is supplied in plain prints as well as in Japans and lustres. The "Ashton" is another very good print, which can also be had illuminated. The bolder "pounced" patterns, suitable to the propensities of the Oriental markets, are not neglected, and the prices of them are quite extraordinary. The firm is, of course, strong in other lines, besides dinner and toilet ware; for instance, they have a by no means negligible range of accessory lines, such as teapots, jugs, marmalades, and general suite ware—in fact, everything of utility for the household. An important point that cannot be overlooked here is that all the patterns on show can, if so desired, be obtained in leadless glazed ware. A demand for such ware has been expressed, and Pountney & Co., Ltd., have thought fit so to apply themselves as to be able to meet it. They have, further, studied the wishes of their clients by including the various advances, which have from time to time been made, in the selling prices of the goods, thus sparing their customers all needless complications. Besides what is to be seen in Mr. Adams's room it may be mentioned that the Bristol firm are important makers also of sanitary ware and tiles. But this is another story, and, as such, must be reserved for a future occasion.

W. Moorcroft, Ltd., Burslem.—Although probably there will be a considerable proportion of the general readers of these notes who, within the last month, may have received an interesting circular from this new firm, for the benefit of those who may not have done so we take this opportunity of referring to it. The circular in question explains that, owing to the discontinuance by Jas. Macintyre & Co., Ltd., Washington Works, Burslem, of the production of the faïence and decorated potteries styled "Florian" ware, which for many years past they have been manufacturing according to the designs and under the supervision of Mr. William Moorcroft, arrangements have been made, with the cordial good wishes of Jas. Macintyre & Co., Ltd., under which this particular class of pottery will henceforward be manufactured by Mr. Wm. Moorcroft at Cobridge, Burslem, under the style of W. Moorcroft, Ltd. The circular further states a fact which the keen buyer will doubtless be ready to acknowledge, that Mr. Wm. Moorcroft "has earned a well deserved reputation for the quality and artistic merit of his work at the Washington Works, as is evidenced by the Gold Medals awarded to him at the Brussels and St. Louis Exhibitions for examples of his pottery, and it therefore seemed most desirable that the good work which he has established should be continued." The writer recently visited the new factory at Cobridge, which has been specially built in order to enable the manufacture of "Florian" ware to be perpetuated, and was extremely interested in all he saw. The factory is of a type which, in a sense, is remote from any of its neighbours, inasmuch as it has been constructed on lines resembling a pottery studio rather than typical of an average "pot bank." The buildings have been designed on the most approved lines, and with every modern comfort; everything is on the ground floor; the various rooms are lofty and splendidly light, the latter

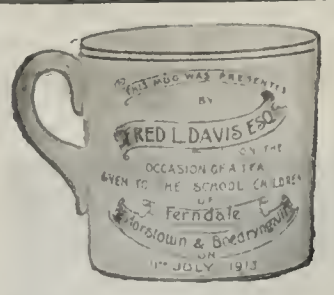


A Moorcroft Bowl.

property being the result of a partial glass roof, and the sanitary arrangements have been carried out on approved Home Office lines, open spaces, &c., intervening between the lavatories and workrooms. A further feature of real interest is that the situation of the factory has been judiciously chosen, for, in the first place, it is directly on the side of the N.S. Railway line, which is obviously advantageous, in fact, it is so near to the station as to be almost considered a part of it; and, in the second place, the position withal is very pleasant, overlooking a small public park. It is not, however, so much to the new factory that I have to refer, but more particularly to the Moorcroft productions, although most pottery houses of repute will be well acquainted with them. Firstly, the articles which are fortunate enough to receive the attention of such an artist as Mr. Moorcroft are all thrown and turned on the wheel, and are consequently characterised in their initial stages by the quality of soundness, whilst the shapes are simple and yet artistic. As for the decorations, these are effected entirely by hand upon the unfired



Typical Specimen of Moorcroft Ware.



"**FIRST** in Speed; **FIRST** in Quality; **FIRST** in Artistic Merit."

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On Saturday, June 28th, we were "called up on the telephone" by a CARDIFF customer, asking for "**7,000 MUGS** with Special Portrait for a Coming of Age Celebration in **10 DAYS' TIME.**" Instantly we prepared a Sample in our Patent Kiln, and despatched it same night. This secured the order, conditional on the **entire lot being manufactured and despatched within 10 days!** This has been achieved, and the World's record beaten. Most of the Mugs had to be **made,** dried, handled, fired (biscuit), glazed and fired glost, and then go through the many processes of decorating, viz.: transferring, lining, gilding, and firing in the enamel kiln. All this work was carried out with the utmost celerity, and the Mugs were **despatched on July 8th, within the guaranteed time.**

To Messrs. Grimwades, Ltd. **[Copy of Letter received from Customer.]**

Dear Sirs, Ferndale, Glam., 16/7/13.

I beg to thank you for the excellent way in which you carried out our order placed through Messrs. . . . . of Cardiff, in connection with the above function. The mugs have given every satisfaction, and travelled without one having been broken. The order was carried out very promptly, and no inconvenience caused in any way.

Again thanking you, yours faithfully, DAVID HANNAH.

GRIMWADES.

THE Firm for Presentation and Souvenir Ware.

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TRANSLATED FROM THE FRENCH BY **K. H. BIRD, M.A., and W. MOORE BINNS.**

ABRIDGED CONTENTS.

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Part II. **MADE-UP OR DECORATED POTTERY.**

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clay, to which is afterwards applied a rich glaze, the result being that, in the subsequent process of firing, the whole is brought into a homogeneous mass. The designs, which are thus quite distinct from mere surface decorations, are the outcome of many years' study and thought on the part of the designer, whose signature places the hall-mark of genuineness on every piece that is issued. Mr. Moorcroft's own words might well be quoted in further description of his idealistic productions. "I have always been charmed," he says, "with the sense of freedom and individuality that has characterised the work of the Eastern potter, and it was after long dreaming of what was possible in this direction that, in 1898, I was first able to express my own feeling in clay. Perhaps no other material is so responsive to the spirit of the worker as is the clay of the potter, and my efforts, and those of my assistants, are directed to an endeavour to produce beautiful forms on the thrower's wheel, the added ornamentation of which is applied by hand upon the moist clay. This I feel imparts to the pottery the spirit and the art of the worker, and spontaneously gives the pieces all the individual charm and beauty that is possible, a result never attained by mechanical means." That Mr. Moorcroft has lived up to his æsthetic ideals hardly needs affirming. Invariably the decorations are in strict conformity and harmony with the forms employed, whilst the individuality and freedom of the brushwork applied to the clay cannot but be appreciated by all in examining the finished pieces. Throughout the colours are skilfully and delicately blended, a fact which must inevitably meet with instant approval. There is nothing like unaided brushwork for an artist who wishes to impart a full measure of expression to his handiwork, and the Moorcroft productions may truly be said to pourtray faithfully the susceptibilities of the designer. It is the intention, I believe, that at the new factory the Moorcroft productions shall be generated in greater variety than ever before, and not only will strictly artistic forms be employed for the purpose, but these quaint slip wares will be produced also for household purposes, such as in tea services, salad bowls, biscuit jars, fruit bowls, bulb bowls, early morning sets, salt and pepper shakers, match holders, tobacco jars, ash trays, and similar articles of both use and ornament, so that there shall be something to appeal not only to the propensities of the collector and the connoisseur, but to the more prosaic needs of a wider clientèle. Our illustrations show a few Moorcroft specialities, which are merely typical of many.



DECORATIVE TEAWARE : W. MOORCROFT, LTD.

Lovatt & Lovatt, Ltd., Langley Mill, near Nottingham, have their London showroom at 26-27, Hatton-garden, E.C., where their interests are watched by Joseph Lockett & Sons, Ltd. The "Langley" leadless glaze stoneware is thoroughly well known in the English markets, especially in the provinces, whilst it is steadily and surely gaining ground in the metropolis. Made from a clay which is quarried in the Midlands, it is, of course, quite distinct in character from the ordinarily accepted white earthenware manufactured for the most part from the Dorset and Devon ball clays, but what it lacks in colour of body is more than made up for in the successful way in which the overlaid decorations are applied; in point of fact, the appearance of the ware undergoes such a metamorphosis at the hands of the decorators that it would be almost difficult to speculate as to the original colour of the "biscuit." Moreover, the "Langley" stoneware possesses certain very commendable qualities, some of which cannot legitimately be attributed to a number of the denser white wares, and amongst these is the important property of heat retention. A more suitable material could hardly be imagined for the manufacture of teapots, coffee-pots, cocoa jugs, hot-water jugs, and other similar articles where drastic variations of temperature are unavoidable in use. It is not surprising, therefore, that this is one of the principal directions in which the Langley Mill pottery's efforts have been directed. In this capacity the firm has long been enjoying popularity, and for an admirable display of such articles dealers are strongly recommended to pay a visit to the Hatton-garden showroom. The designs are diversified and plentiful; moreover, they are far-reaching, for, from the original "Langley" ware there has been a gradual evolution and extension in the direction of coloured slips, coloured glazes, interchangeable coloured bands, &c., until there has been built up quite a strong and interesting line. One of the newest styles of decoration consists in the employment of an amber glaze, which is exceedingly smart looking, and is taking on very well indeed. Its appearance, even in the bulk, is admirable, and as it is generally recognised that pieces often look incomparably better when singled out than when surrounded, as in a pottery showroom, by much that is diametrically opposed to them, and consequently negatives their individual charms, it is quite reasonable to forecast that this line will prove a thoroughly successful one. There are also some very good new lines on show in slip-painted articles, which are assisted by a "runner" embossment, and as the available colours are so variable, it is conceivable that finality is, as yet, far from reached in decorative possibilities, and consequently also in the matter of choice. In heat-resisting pie-dishes and cooking utensils of similar species there is a wide scope, the sizes and shapes being prolific. Stew jars can be had in all sorts of sizes, and at distinctly moderate prices, as also many other articles which are part of the necessary complement of the up-to-date kitchen. For footwarmers there is possibly no better material, and the utmost use has been made of this fact at Langley Mill. The "Cosy" bedwarmer is a capital little speciality, having several features to commend it. At this particular period of the year such articles are quite an adjunct to the business of Lovatt & Lovatt, Ltd., and as in our trade it is even

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WRITE FOR NEW CATALOGUE AND PRICE LIST.

necessary to look some months ahead, a timely reminder is here ventured that the colder weather has already sent out its advance notices, and, after all, it is not a far cry from autumn to Christmas. In ornamental lines such as vases, flowerpots, pedestals and pots, and the like, one can always be sure of seeing quite a good assortment at the showroom under notice. Lovatt & Lovatt, Ltd., have always offered quite a variety in such lines, and treated, as the patterns are, principally in combinations of blues, greens, myrtle, &c., they are thoroughly attractive and possess a charm quite their own. One very good design is No. 921 ; it is available in assorted colours with a "Lotus" motif, and it is also supplied etched and gilt. There is a range of flowerpots having a band of blue, green or myrtle at the top, or with additional bands at will. As with the bands, so with the slip-coloured grounds ; alternation or interchange of colour can be effected simply, the predominant effect being sage, blue, ivory or what not, to suit individual tastes. There is an admirable showing of small and artistically shaped vases suitable for the cabinet or the mantle, and the changes are tirelessly rung with the decorations chosen to surmount the prevailing self-coloured slip ground. An outstanding line of tobacco jars, with hermetically sealed covers, treated in a variety of forms of a novel but agreeable type are specially worthy of mention. Some of the large pedestals and pots, certain of which have a total height of 34 in., are unqualifiedly handsome, and cannot be spoken of too highly. Our photograph shows a section of the room at the time of our visit.

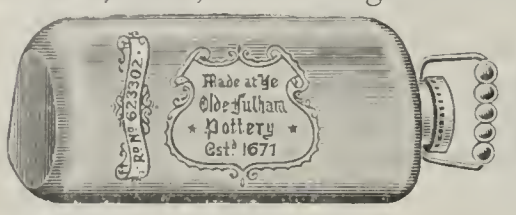


LATEST LINES IN LANGLEY WARE : LOVATT & LOVATT, LTD. [*Photo. by "The Pottery Gazette."*

Stevens & Williams, Ltd., Brierley Hill Glass Works, near Stourbridge, have their London rooms at 57-60, Holborn Viaduct, E.C., where they have always a magnificent show of their beautiful crystal glassware, and where Mr. J. W. Walton looks after their interests. Calling there a few days ago, the writer was charmed with some of the very newest lines which have just been received from the works. The class of goods into which the firm appear to be particularly throwing their energies just now is the heavily cut, and there are a number of absolutely new suites which can only be described as superlatively handsome. There is apparently nothing in the realm of ornamental or table glass for which Stevens & Williams are unable to quote, and to see their samples is to linger admiringly. One large table at the moment is completely filled with rich diamond-cut crystal, the cutting being more than ordinarily pronounced, thus putting an effective barrier between the genuine cut and the clever imitation. The colour of Stevens & Williams' glass is pure in the extreme, and nothing could be more pleasing in effect than some of their most recent productions. Many new shapes are included in the series of novelties which they have brought out for Christmas trade. There is a capital line of richly cut rosebowls having a tall pillar and foot, and the same idea, with certain modifications, has been introduced into the manufacture of a series of cut-glass jam jars, these having also a tall stem support. In addition to the white crystal glass there is a capital range of cut-glass in "cased" colours, the variation of tints being quite remarkable, and the combination in some cases almost bewildering. One of the most novel things I have had the pleasure to see in glassware, I found in Mr. Walton's rooms in the form of the old "Willow" pattern, beautifully executed on a blue ground in a distinctly unique way. In large vases, there are some handsomely carved pieces presented just now for inspection ; in fact, there is such a comprehensive variety of admirable lines that I hesitate

to particularise. Buyers who have not recently visited Mr. Walton's rooms are strongly advised to take an early opportunity of viewing his new range of samples, for it cannot fail to contain something which is calculated to stimulate interest. Our illustration shows three pieces of the pronounced diamond-cut ware—a decanter, a whisky bottle, and a water jug.

The Fulham Pottery and Cheavin Filter Co., Ltd., Fulham, S.W., have brought out an entirely new registered design of stoneware footwarmer (Reg. No. 623,302), its advantages being that it is made with all the edges rounded. It is highly glazed, heat-retaining, and fitted with a swing handle. The price, which we are unable to mention, is, moreover, very moderate. The firm will be pleased to issue further particulars on application.



Wm. Adolph & Co., 9, Bury-court, St. Mary Axe, E.C., who have recently been appointed the sole agents for the United Kingdom of the well-known firm of Theodor Hüttl, Budapest (established 1854), have received an advance range of samples of fine Hungarian china, which the writer has been courteously allowed to inspect, and a few pieces of which we are pleased to illustrate on the opposite page. The preliminary samples are all of one design, which, however, is certainly something quite distinctive, and indeed unique. Although quaint to a degree and totally different, of course, so far as the writer's knowledge goes, to anything emanating from the English potteries, it must, at the same time, be conceded that it has a really sterling charm and grace, and would be considered becoming amid the most elegant surroundings. From a first inspection one would imagine that the design might be calculated to fulfil its functions best when displayed in a complete range, such as the equipment of a first-class hotel, especially as the china is—as Hungarian china is wont to be—considerably stronger-worked than the average English bone china. The decoration is in the form of a black band about ½ in. wide, embroidered in blue, green and yellow, this "embroidered" band—I know of no other term to describe it so well—being broken at a point to admit of a cameo figure painting, evidently typifying early Roman art. The range, as at present displayed, is fairly representative of the ordinary useful table lines—plates, cups and saucers, flat dishes, butter dishes, coffee jugs, water jugs, &c., whilst there are a number of side lines, such as a sandwich dish, an ash tray, a pilgrim bottle, threaded with a piece of cretonne, and a series of vases. Wm. Adolph & Co. intend to exploit the English market in the interests of this Hungarian china, and to test the demand for it.



[*Photo. by "The Pottery Gazette."*

NEW DIAMOND-CUT GLASS: STEVENS & WILLIAMS, LTD.

U.S. Pottery Imports during the first half of the current year were valued at $4,442,000, as compared with $3,981,000, and $4,830,000, respectively, for the corresponding periods of 1912 and 1911.

The Export of Earthenware from Austria-Hungary during the first six months of the current year amounted to 46,723·2 m. tons, and showed a substantial advance. Of this total the quantity classed as porcelain, 8,285 m. tons showed a slight falling off.

EFFECT OF SOLUBLE SULPHATES ON KAOLINS AND CLAYS.

(SPECIALLY TRANSLATED.)

THE results of Ricke's investigations on this subject may be summarised as follows :—

(1) Soluble sulphates, when added in small quantities to thin clay slip, increase its viscosity, calcium sulphate, aluminium sulphate, and the sulphates of the heavy metals being particularly effective. The effect is greater on plastic clay than on Zettlitz kaolin, especially in the case of aluminium sulphate.

(2) The alkali sulphates have a stiffening effect when added in very small quantities, slightly larger amounts producing liquefaction, but still larger additions causing a considerable increase in the viscosity again. A diminution in effect on increasing the addition is also observed with zinc sulphate and copper sulphate.

(3) The efficiency, expressed as the quotient of the increased viscosity divided by the initial viscosity, increases considerably in all cases when the amount of added sulphate is small, but only slowly with larger quantities. It is not independent of the water content, but varies to a fairly considerable extent with changes in the ratio of kaolin to water.

(4) The thickening influence of calcium sulphate and magnesium sulphate can only be diminished, but not entirely counteracted, by additions of sodium carbonate or other neutralising agents. Consequently a material which is rich in these sulphates will never be so suitable for casting purposes as material that is free from saline matters.

(5) Kaolins, and probably clays to a still greater extent, absorb soluble sulphates, but this absorption is only very small in the case of the alkali and alkaline earth sulphates, including that of magnesium.

(6) In the case of dilute solutions of ferrous sulphate, a portion of the iron is extracted by kaolins and clays, probably in the form of ferric hydroxide, whilst the SO_4 ions remain almost completely in solution. Whether and in what quantity any other cathions pass into solution from the kaolin has still to be ascertained.

A similar reaction takes place in the case of ferric chloride. In each case the amount of iron absorbed depends on the concentration of the electrolyte solution used. The phenomenon of absorption appears to follow the usual laws of these phenomena, in which the conditions of equilibrium can be expressed by one of the known formulæ. The absorption of aluminium from solutions of aluminium sulphate seems to take place under analogous conditions. —(" Sprechsaal Kalender.")



HUNGARIAN CHINA : WM. ADOLPH & CO. (*See opposite page.*)

British-German Pottery Trade. — A British Consular Report from Bavaria says :—One sees large quantities of British crockery and porcelain in the better class shops ; on the other hand, a considerable amount of German-made crockery is exported to the United Kingdom.

SOME NORTH WALES CHINA SHOPS.

(By a "Pottery Gazette" Special Commissioner.)

FROM the sunny slopes and balmy climate of "Glorious Devon" to North Wales with its mountainous peaks and breezy, bracing atmosphere might to some appear a somewhat drastic move, yet such have been my last two journeys in the course of my ramblings amongst the retailers. The apparently severe change, however, is robbed of its accentuation when, in between the trips, one has other calls to make, not located by sunny shores, but identified with the blackest smoke and all the other necessary conditions of industrialism.

It is some years since the retail shops of North Wales were previously noticed in this Journal, and as it was thought quite likely that certain changes or developments might have taken place in the meantime I was commissioned to proceed there, and to "get into touch." I recognised at once that the journey would be a "thin" one, so far as its yield in editorial matter is concerned, though, fortunately, I had no other axe to grind. China shops in North Wales, as pottery travellers may possible agree, are not exactly sown like mushrooms—I mean legitimate china shops, for in all these notes I hope it is clear that I leave out of consideration the newsagent and the tobacconist who happens to have a few souvenirs on show in the form, possibly, of crested china. Of these there are many, but china shops, as such, are thinly sown in North Wales. Fortunately, however, I had the facility of knowing whe to find the best of them. I made my way first of all to



GOLDSTRAW BROS., RHYL.

RHYL.

Rhyl, as a resort, is popular in the season, and I found it so at the time of my call on a sunny morning in the mid-week, in spite of the fact that the season was getting "late on." As if thoroughly familiar with the ground, which, as a matter of fact, I was not, I made my way straight down from the station to the shopping locality, and soon encountered the shop I was looking for, viz., that of

GOLDSTRAW BROS., 4, Bodfor-street, Rhyl. I was not long in introducing myself, and was certainly fortunate in finding both of the gentlemen present who are partners in the concern. On explaining the purport of my visit I was extended every courtesy, and though it was a busy morning, between the inquiries of numerous customers I was able to gather what I wished to know. But before referring to anything which I elicited in the course of conversation, I ought perhaps, to refer to the impressions which I formed beforehand. The shop is situated right in the heart of what I probably rightly regarded as the principal shopping thoroughfare of Rhyl, and consequently is in a uniquely favourable position from the point of view of a passing trade, which is always an important consideration in a seaside resort. There is a double frontage, the left hand window of which is devoted to jewellery, the reason for which will probably appear clearer when I announce that the two partners are the sons of Mr. Goldstraw, the well-known jeweller of Hanley, Stoke-on-Trent, who has been associated with the jewellery business for the last forty years, having originally started at Leek, Staffs. The two brothers now in partnership at Rhyl, who, by the way, are both quite young men, are well placed in regard to experience calculated to fit them to run a dual business of this character, for the senior brother, Mr. F. Goldstraw, had a fairly long connection with Josiah Wedgwood & Sons, Ltd., of Etruria, whilst the younger brother, Mr. E. Goldstraw, acquired in his father's business a practical and useful knowledge of jewellery, which section of the business at Rhyl he specially superintends, although at the same time he renders valuable service in the china and earthenware branch.

The last time the Rhyl shop was noticed in the interests of THE POTTERY GAZETTE it was under the proprietorship of Mrs. E. Wedgwood—of no relationship to the Etruria house—and she had occupied it since the year 1869, when it was founded by her husband. Goldstraw Bros. purchased the business from that lady about seven years ago, and from that time to the present have been gradually but surely developing it. When I called I was not long in being impressed with the fact that although the trade is, more or less, essentially a season one, it has not on that account been allowed to degenerate into a rough and ready one. They have carefully conserved their position as the leading china and earthenware dealers of the town, and their window at the time of my call was well stocked with some choice lines. It is only necessary, perhaps, to mention in support

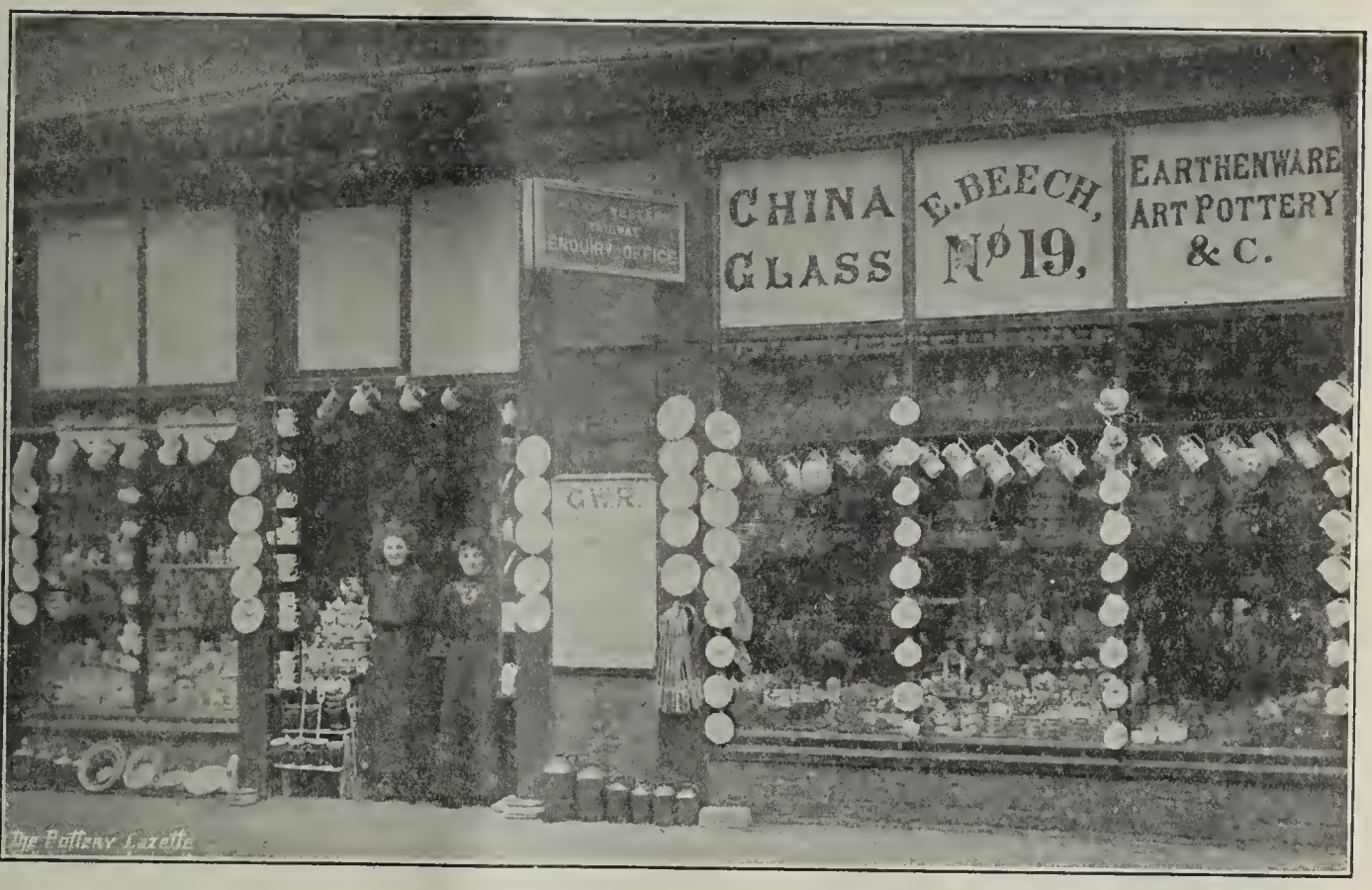
of this that they handle the wares of famous makers, such as Coalport, Crown Derby, Worcester, Copeland, Minton, Wedgwood, &c. In mounted jasper ware they have something to suit everyone. In the season they find a great advantage in having this jewellery section of their trade, although it is kept distinct and separate from the china and earthenware, as I have said, and has its own individual window. Fortunately, Rhyl is used as a shopping centre for many of the outlying towns, and it is fortunate that the trade emanating therefrom helps to equalise matters somewhat in the winter, when that section of the trade is principally done.

The shop inside is fixtured on the usual lines, there being the orthodox centre fixture and the customary shelving. The centre stand was laden with a choice display of high-class miniatures and souvenirs, amongst which Coalport, Crown Staffordshire, and Wedgwood probably stood out more than anything else, though there were other good makes too. In the larger pieces of decorated pottery on view elsewhere in the shop the "Lancastrian" lustred ware of Pilkingtons' Tile and Pottery Co., Ltd., the "Florian" ware of Moorcroft, Ltd., and a number of other lines of similar prestige show that Goldstraw Bros. are endeavouring to keep up quality in the matter of seaside presents. Glassware is not neglected in their display, and the "Mother of Pearl" of Mr. John Walsh Walsh is not played out even yet, evidently, for I observed it occupied a conspicuous position. In the coat of arms china they run the 'Carlton" line, and they held quite a good stock of it on the occasion of my visit, containing a wide variety of articles.

I have no doubt that Goldstraw Bros. are on the right lines, and I do not make this observation having merely peeped into the front shop, for I was very courteously shown over the whole premises, from the carefully "groomed" front shop to the warehouses at the back, and upstairs, too, even to the lumber rooms. I have no doubt whatever that when I next have the pleasure of calling there, I shall find them still much in evidence.

There is, however, another china shop in Rhyl which I felt I could not miss.

E. Beech & Co., 19, Wellington-road, Rhyl, have large premises employed for the bonâ fide transaction of china and earthenware. They have been established here for a long time. Miss M. E. H. Beech, in whose charge the business now is, courteously received me, and was not averse to giving me some little information, from which I learned that the trade was founded by her father, Mr. Jesse Beech, some 28 years ago, and after his death was continued by his widow until her death about five years since, after which the fortunes of the concern fell to the lot of Miss Beech and her sister. The trade is a totally different one to that of the one previously referred to in this article, inasmuch as expensive lines are clearly not encouraged. Everything which Beech & Co. elect to handle is of a moderate and readily saleable character. The proprietress recognises it and affirms it, as her father did before her. They prefer to have it so, at the same time they are not without some good lines in earthenware, proved by the fact that they are the sole agents in Rhyl for "Bretby" ware, whilst they also show Royal Doulton, Royal Worcester, Minton, &c. But it is everywhere apparent that Beech & Co. foster a quick turnover, and the premises are well adapted to their purpose, as there is plenty of room. In the summer present trade they do particularly well, and was surprised at the number of customers who walked into the shop during the short space of time which I spent there. The firm has all the usual assortment associated with a seaside trade, with a fair showing of substantial lines in earthenware besides; for instance, they have some nice dinner sets, and run the "Burleigh" ware particularly. The premises take the form of one very spacious shop on the ground floor, with two small warehouses at the back. At the rear of the shop there is a sort of gallery, and this is well chosen for the display of some of the more bulky lines, such as toilet ware. The central fixtures of the shop are principally concerned with a display of cheap tea sets and ornamentals. In teapots, jugs, sugars, and creams and similar lines they have a warm business, and in the direction of cheap glass they are also laid out for supplying at a price. A case of Royal Worcester at the front door I understood had been responsible for some good sales this season.



E. Beech & Co., Rhyl.

It is not often possible clearly to classify the china businesses of any particular town, but it is not difficult to do so in Rhyl. The two businesses with which I have dealt briefly—Goldstraw Bros. and Beech & Co.—are the only two of any importance: the first-mentioned is of an undoubtedly superior order and deals in the best; the last-mentioned, on the other hand, has a trade which probably, in a way, is much faster, but of a cheap and moderate order.

(To be continued.)



NATIVE CANARY ISLAND POTTERY.

(SPECIALLY CONTRIBUTED.)

THE very words "cave dwellers" seem to take us back to the far-distant past, for it is hard to realise that there are people who live in caves to-day, and who carry on primitive industries, much in the same conditions as did their forefathers of the stone age, centuries ago. Yet, in the Canary Islands, just a few miles from the busy, up-to-date town of Las Palmas, groups of workers, squatted on the ground, just outside their cave dwellings, can be seen, and are quite a feature of the place. They earn their living by making pottery in the Atalaya, a district quite near the mouth of a volcano, the very soil they tread on having been blown up from the bowels of the earth; nothing can grow on the lava-covered ground but vines. These natives of the mountains live very simple lives and only go down to the town to sell their wares, and to buy provisions and clothing.

Pottery answers to a primordial necessity, and is, therefore, one of the most ancient of human industries, which was present in the earliest stages of civilisation. The first manufactured articles would naturally be hollowed-out receptacles to carry water in, and even to-day, of the native pottery of the Canary Islands, it is the water jars which predominate. Locally they are called "talla," and are sold from 3d. to 8d. each, according to the size, and to the finish of the article. Flower pots and "ollas" (round earthen cooking pots) are also plentiful. The potters work and model the clay with their hands, shaping it in a variety of styles, the simpler ones meant for ordinary domestic use, being dull, rudimental articles, without polish or ornamentation, the better quality ones having a beautiful shiny surface, with handles and sides covered with simple lines and curves in geometrical order, cut out with a primitive penknife; they have some pretensions to artistic merit.

The substance out of which these articles are made is potters' earth kneaded with water until a finished paste, pliable and ductile, is obtained, which is then manipulated into shape, the surface being smoothed and polished with the fingers. When the shape is ready, it is fired, the clay then becomes as hard as stone, and capable of holding liquids.

The articles made by native Canary potters do not differ in composition and characteristics from the earliest pottery known, the shapes keep to those most suitable for domestic use, such as pots, earthen pans, milk pans vessels, hemispheric vases, saucers, deep dishes, basins all more useful than ornamental.

The impure clay is left to rot in the caves so as to make it more plastic and ready for modelling. There are two distinct kinds of native pottery, the unpolished, dull variety, and the glazed and varnished one. The dull pottery, without any coat of plaster, is most like the early Greek, Egyptian, Etruscan and Roman specimens, of which they are direct descendants, such as flowerpots, porous vases used as wine coolers, &c. A few of these articles have a special lustre which is not varnish, but is merely a gloss brought about by rubbing and polishing. At times a purely earthen glaze has been tried, but the lustre so obtained is not very



[*Photo. by Nanson, Las Palmas.*

CANARY ISLAND POTTERY KILN.

effective, and does not repay the work it entails, so it is rarely resorted to. The ancient potters used a kind of polish of a silico-alkaline appearance, the actual ingredients of which are now unknown; it had the valuable property of being unattacked by acids. Ordinary varnished pottery is covered with a lead glaze, and is



GROUP OF CANARY ISLANDERS WITH THEIR POTS. *[Photo. by Nanson, Las Palmas.*



[Photo. by Nanson, Las Palmas.
CANARY ISLAND POTTER AT WORK.

produced in three colours, yellow, brown, and green; but the typical Canary pottery is red. To obtain a yellow colour a composition of litharge, silicious sand, and plastic clay is used; for brown, manganese is added; and green is obtained by adding protoxide of copper. All these are easily fired, and can be produced very cheaply, but their texture is porous, and fat substances leak out; they are dangerous receptacles for placing food in, on account of the lead they contain, which easily combines with alimentary substances, making them poisonous and unfit for consumption.

All ordinary clay pottery is red after baking, the shade differing according to the quality of the earth employed in their manufacture. The Canary potters, after having prepared a number of shapes, store them in rows inside the caves, and leave them there for some time before firing them, so that when exposed to the fire, sudden shrinkage may not make them crack. The finished article is taken to an oven to fire, but amongst the natives a more primitive way is still often adopted; the vases, plates, dishes, &c., being placed in a hollow cavity in the soil, and fired by burning briars, thorns, and brambles.

Cave dwellers and native potters are disappearing rapidly from our midst, modern civilisation carrying everything before it; therefore these photographs, showing native Canary potters of to-day, have a special interest.

Porcelain and Earthenware to the value of £323,700 were exported from Japan during the first six months of 1913. The value shows a marked advance.

Beirut Pottery and Glass Imports during 1912 comprised: Earthenware, Beirut, 3,850 casks and cases (+ 350); Tripoli, 150 (−380); chiefly from Austria-Hungary; the best qualities from France. Some common earthenware was imported from Italy during the latter part of 1912. Glass and china, Beirut, 1,970 cases (−680); Haifa, 1,395 (+ 208); Tripoli, 1,500 (−1,758). Most of the glass and china imports are from Bohemia; superior qualities from France; window glass from Belgium.

A SPECIAL "FIREPROOF" WINDOW.

ON many occasions have we emphasised the value of the "special window" as a business-bringer for retailers. Such a display is naturally beneficial to the particular goods selected, while it also enhances the interest of the more general lines when they are again exposed to public view after their temporary seclusion. We are pleased to illustrate a special Fireproof Earthenware Window recently dressed by Wm. Rowland & Son of Folkestone. The ware was all supplied by J. Chomette & Son, and it will be seen that the effect is excellent. The photograph has suffered from reflections, but it will be understood that no "reflections" are cast upon the quality of the goods. Instead, the town-crier, a historic institution and quite a local celebrity, has been engaged to laud them as they deserve.



A SPECIAL "FIREPROOF" WINDOW.

Varieties of Glass.—According to an old authority, glass may be classified in five denominations:—(1) Batch glass, or coarse green glass; (2) Broad glass, coarse window glass; (3) Crown glass, extra white window glass; (4) Flint glass, crystal or lead glass; (5) Plate glass.

Mending Old China.—Many kinds of china may be mended with a very efficient cement made by mixing together into a paste equal quantities of whey of milk and vinegar, powdered quicklime and the white of an egg. The mixture must be well beaten and warmed. Expose the broken edges of the china to heat before applying the cement. A very thin coating is sufficient, and the joint should be held firmly in place until the cement has dried. Broken china may also be mended with a paste made of plaster of paris and glue. Use the ordinary glue, mixing one part of the glue with two of water and adding the plaster of paris to it.

SILVERING HOLLOW MIRRORS.

THE best way to silver hollow glass mirrors is to clean the surface of the glass thoroughly, rinsing it with water, and flooding it with alcohol in order to dispel the adherent stratum of air, and thus prevent the formation of air bubbles, which would destroy the continuity of the silver deposit. The glass is then placed in the vessel containing the silvering liquid, in such a way that the face of the glass is brought into complete contact with the solution. This vessel should contain only a very shallow layer of the silvering liquid, and the bottom of the vessel should conform to the shape of the article to be silvered, so that the surface to be coated is equidistant all over from the bottom. The silvering solution is prepared by dissolving 4 parts of Seignette salt (potassium-sodium tartrate) in 1,920 parts of distilled water, heating this solution to boiling and slowly pouring into it a solution of 5 parts of silver nitrate in 40 parts of distilled water. After boiling for another 5 minutes, the liquid is cooled and filtered. Another solution is made of 20 parts of silver nitrate in 160 cc. of distilled water, ammonia being added, drop by drop, until the precipitate first formed has almost disappeared, the solution being then diluted with 1,800 parts of distilled water. These two solutions are mixed in equal proportions shortly before use.

When the silver deposit has been formed, which will take place about an hour after immersion, the hollow glass is taken out, carefully rinsed with warm distilled water, and dried in a warm place. If the deposit has been properly formed, it can be polished with the ball of the hand. If necessary, the deposit can be strengthened by repeating the immersion, after rinsing, until the desired thickness is attained. It should be protected by a layer of varnish or by plating it with copper.

PORCELAIN GLAZES.[1]

(*Concluded from page* 1048.)

CALCULATING the probable equivalents of minerals which, from studies in geo-chemistry, we judge would be formed by fusion of the glazes in Series A, we have :—

	Group 1.		Group 2.		Group 3.		Group 4.		Group 5.	
	A1	A5	A1	A5	A1	A5	A1	A5	A1	A5
Orthoclase	0·2	0·2	0·25	0·25	0·333	0·33	0·35	0·4	0·5	0·5
Leucite	—	—	—	—	—	—	0·05	—	—	—
Anorthite	0·3	0·6	0·25	0·25	0·167	0·467	0·1	0·4	—	0·3
Wollastonite.....	0·5	0·2	0·50	0·20	0·50	0·199	0·5	0·3	0·5	0·2
Free SiO_2.....	0·7	2·2	0·5	2·0	0·18	0·67	0·5	1·4	0·5	1·0

We will not attempt to draw conclusions from these data, but offer them as suggestions for study.

Calculating the molecular ratios of K_2O to Al_2O_3 as was done by Purdy (p. 158, Vol. V., "Trans. A.C.S.") we find the following :—

Member.	Groups.				
	I.	II.	III.	IV.	V.
1	1 : 2·5	1 : 2·0	1 : 1·66	1 : 1·25	1 : 1·0
2	1 : 2·75	1 : 2·2	1 : 1·84	1 : 1·4	1 : 1·1
3	1 : 3·0	1 : 2·4	1 : 2·0	1 : 1·5	1 : 1·2
4	1 : 3·5	1 : 2·8	1 : 2·3	1 : 1·75	1 : 1·4
5	1 : 4·0	1 : 3·2	1 : 2·7	1 : 2·0	1 : 1·6

From the curves by Purdy it is readily seen why, in Series C and D, each increase of clay above the minimum used in any one of the groups in this study should have increased the refractoriness of the glazes. In Members 1 and 2 of Series C, Groups I and II., we no doubt have the most fusible mixtures that can be obtained with these RO's. Seger (p. 236, Vol. I.) found that with 0·25 K_2O and with ratio of Al_2O_3 to SiO_2 of about 1 : 6 (the same as ours) he obtained maximum fusibility with 0·5 equivalent Al_2O_3 and found that either less or more Al_2O_3 caused an increase in refractoriness. This mixture of Seger's is about the same as our II., A1.

HEAT RANGE.—Increase of clay with constant feldspar content decreases the heat range. If additions of clay in these glazes makes them less fusible, these additions must be making the mixture more and more removed from the eutectic mixture of the compounds involved, which, by theory, should decrease the heat range in which a good glossy condition free from overfiring would be maintained. A study of these highly viscous, and in many cases incomplete, solutions checks the theory.

OPACITY.—While increase in clay content in any one series increases opacity, we cannot attribute this increase of opacity to the mere increase in clay, for on comparing corresponding glazes in the several groups we have equi-opacity with the same Al_2O_3 content whether that Al_2O_3 be derived from feldspar or from clay.

CRAZING.—We have crazing only in Groups III., IV., and V., it being worse in Group V. In any series where crazing occurs, we find that it is decreased by increase of clay.

EFFECT OF FELDSPAR.

We have, in many particulars, already discussed the effect of feldspar variations, and it remains now to point out things that seem to be due more to feldspar than to any of the other constituents.

CRAZING.—We find that on both bodies, we have crazing only when the feldspar is present in comparatively large amounts, i.e., in Groups III., IV., V.

That crazing should increase as the K_2O is increased at the expense of CaO and ZnO is in keeping with Seger's findings, and that crazing should decrease with increase of clay is in keeping with the general experience with all types of glazes. We question, however, the reasons usually assigned for the effect which these changes in composition have on crazing. In most cases many of the physical properties of the glazes which have to do with the control of crazing have been ignored.

We note that in Groups IV. and V. the glazes in Series A have so shrunk as to leave a bare border around the edges of the tile. That mixtures of feldspar and whiting should so shrink is at first thought surprising after learning that high feldspar and high whiting counteracts shrinkage in bodies (see Rieke, Nos. 37 and 38, "Sprechsaal," 1906). In bodies, however, we do not approach the degree of fusion we have in glazes ; hence, we can not argue the effect of mineral constituents on glazes from their effect on body composition.

We know from our white ware body studies that the high feldspar mixtures increase in volume when vitrifying, and from the fact that these mixtures have shrunk to the centre of tile makes evident that they have enormous shrinkage when fusing down to glasses. Being very viscous, such strains as would be set up within different layers of the glaze by this reversal of change in volume during fusion could not be equalised by such annealing as is obtained with the rate at which kilns are usually cooled. Unless the coefficient of elasticity of the glaze is large enough to allow of these differential strains, the glaze must break the same as the Prince Rupert drops. Additions of clay and especially of ZnO increase the elasticity of the glaze ; hence, according to our theory they ought and do decrease crazing (see Staley, Vol. XII. "Trans. A. C. S.," and Hovestadt, "Jena Glass").

That at cone 12 the glazes high in feldspar should show craze marks next to the body but not on the surface of the glaze is confirmation of our theory. In these cases, a casual inspection would lead one to believe that the craze lines extended through all depths of the glaze, but closer inspection failed to disclose any break in their upper surfaces. That increased heat treatment should correct crazing on the upper surfaces of the glaze, and not at the lower surface is no doubt due to their high viscosity which materially decreases the rate at which reactions within the fusing glaze can take place. From these cases it would seem that these glazes containing 0·5 equivalent of feldspar would have, if completely fused, sufficient elasticity to withstand these strains.

GLOSS.—The high surface tension of these highly viscous glazes results, no doubt, in a higher gloss than would otherwise be obtained. With less viscous glazes, much more complete fusion would be required to obtain a gloss equal to that shown by many of the glazes in these experiments. The high gloss on all members of Series E, Group III. at cone 7, for instance, is no doubt due to this high surface tension, which results from ultra-viscosity. This may explain why the influence of clay decreasing gloss did not show in the high zinc glazes as much as it did in the high lime glazes. The effect of additions of clay on gloss is not so pronounced in the case of the high feldspar glazes as in those with lower feldspar. Whether this difference in gloss noted in Group V. and in Group I. bears any relation to differences in surface tension or of the viscosity is not plain from the data at hand.

In conclusion, we give as the best glazes for each body,

[1] By Ross C. Purdy, Columbus, O. The study here reported was made with the senior class at the Ohio State University. The study was made first by the class of 1910 and repeated with new mixes by the class of 1911. All weighings, &c., were made by two members of the class employed for that purpose. The report as here presented is a copy of the class report reprinted from Vol. XIII. of the Transactions of the American Ceramic Society.

the following. In these conclusions, we have considered all factors, such as gloss, crazing, colour, cost, heat range, &c.

STONEWARE :—			
III.	C	(1, 2, 3)	cone 7–10
III.	D	(1, 2, 3)	cone 7–10
IV.	D	(1, 2)	cone 7–10
PORCELAIN :—			
III.	C	(1, 2, 3)	cone 7–12
IV.	D	(1, 2, 3)	cone 7–12
V.	C	(3, 4)	cone 7–12

None of the porcelain glazes are up to the best that could be secured with higher SiO_2 content. It is factory experience, however, that to secure the best and brightest glazes even with the higher contents of SiO_2 a portion of the CaO of Seger's cone mixtures must be replaced by some other RO, and of these, ZnO (with K_2O and CaO) has given the best results. To obtain good porcelain glazes, therefore, the SiO_2 content of the above must be raised until the Al_2O_3–SiO_2 ratio is 1 : 8 or 1 : 10.

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

BREAKAGE OF IMPORTED GLASSWARE.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—In the general interests of all parties concerned with Continental table glassware, we shall be glad if you can spare space to remind both importers and retailers of the conditions which, from the inception of the trade, have governed the sales; conditions well established into a trade custom, thoroughly understood and honourably recognised by the older, but imperfectly understood by the newer members of the trades, viz., that the prices of all foreign table glass are, and always have been, arranged on the understanding that all risks in transit, whether from breakage or pilferage, were absolutely the buyer's, this condition applying whether the packages travelled direct from abroad to the retailer or from any stock held by the importer in railway or shipping companies or other warehouses, the packages being as received from abroad, and in no way interfered with by the importer. The newer generation appears to have very hazy ideas of this custom, and expect to receive their packages—which are subject to risks incidental to sea and land transit—free from breakage, or if any, to claim its value from the importer or agent, even although conscious that no provision has been made for this in the price of the goods. Much needless correspondence, often acrimonious and always irritating, is the result of this misconception—real or assumed—as to the validity of this vital trade custom. The prices ruling to-day are the most unremunerative to the importer or agent in the whole history of the trade, brought about mainly by the ruinous competition amongst themselves to capture business, and as some have yielded to unreasonable demands from retailers over transit risks there has gradually grown an idea that breakage is an importer's risk, however absurdly low the price of the goods; the trade has degenerated into mere huckstering, and we think the time is long overdue when a clear re-statement of the custom should be made, and not only to restore it unqualified, but to try and re-establish the whole business upon sounder lines. Freights, warehouse and handling charges have all increased, yet selling rates have declined and the margins are lower than at any previous time. We enclose our card, and remain,—Yours, &c.,

London, Sept. 22. AGENTS & IMPORTERS.

ANSWERS TO CORRESPONDENTS.

L. E.—We cannot find any mention of the pattern, No. 5,616, amongst Dimmock's patterns in our Diary for 1905, in which a list of the purchasers appears. It may, therefore, be necessary to write to each of these describing the pattern and asking for the information.

H. F.—None of the many books on ceramics that we have referred to makes any mention of Bull Bros., Sunderland, although we note several firms who have manufactured ware of similar description at Sunderland. We do not pretend to be experts in identifying old china or earthenware.

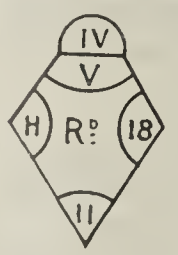
S. W.—We have made many inquiries, but we cannot trace the origin of the mug you refer to with inscription, "Charlotte Hobart, 1820," and motto: "It is better to be virtuous than to have a pretty face." Mottoes such as this are very commonly found on old mugs, and, in many instances, no particular interest is attached to them.

Enquiries Answered Through the Post.—Ware marked "Stork & Fan; M. & Co."——Yellow-glazed French fireproof ware.——Grosvenor china, black key pattern on gold ground, marked with a crown.——Gadroon china with pink roses, Rd. No., 449,298.——Earthenware crosses for placing flowers on graves.——Cup; Reg. No. 237,244.——China with crown and mark H. A. & Co.——Ware marked "Chinese, Key, M. & Co."

P. F. C.—The decoration No. 981 and weights and measures stamp No. 33 marked on the jug are of no use to us in tracing makers. Every manufacturer usually starts his pattern book numbers with 1, and in course of time reaches 981, so that such a number is in common use by hundreds of firms. As to the weights and measures stamp No. 33, this is the one used in South Staffordshire, but the jugs may have been made in Scotland or anywhere else and the stamping done by the local authorities for a local dealer there.

L. C.—The Cyprus pattern was disposed of by Brownfields to the Burslem Pottery Co., Scotia Works, Overhouse-street, Burslem. To ask when the pattern was first produced is to give us a problem that we are unable to solve in the absence of Messrs. Brownfield's pattern books to refer to. We have no records as to the age of any manufacturer's patterns, excepting in some instances when we know their "year mark." If you should have a pattern of the Cyprus pattern to hand, and it should bear a registered design mark and number, the information could be obtained by making application to the Comptroller Patent Office, Designs Branch, 25, Southampton-buildings, Chancery-lane, London, W.C.

M. G.—This is the old style of marking registered designs, and was discontinued in 1883. The pattern you require to know maker of is, therefore, 30 years old at least—probably considerably more, and no records are published or available to us for reference previous to 1883. We should advise you to look at the bottom of all the pieces of the service, and see if any makers' marks can be found thereon, and, if so, write us again. If unsuccessful in this search, your only alternative is to send an exact facsimile of the mark and write to the Comptroller, Patent Office, Designs Branch, 25, Southampton-buildings, Chancery-lane, London, W.C., and ask what the cost will be of making a search for the registered proprietor of the design.



Empire Notes.

Earthenware, China, &c., to the value of £206,408 were imported into Australia during the first six months of the current year as compared with £214,136 worth imported during the corresponding period of 1912.

Empty Bottles imported into the Australian Commonwealth for the purpose of being used as containers of Australian produce are not exempt from the provisions of the Commerce Act as to the indication of the country of origin.

The Medicine Hat Pottery Co., Medicine Hat, Saskatchewan, Canada, has completed the erection of its plant, and is in full working order. It is said to be turning out stoneware of a good quality, for which there is a large demand.

Evans, Fraser & Co., Bombay, well known in the wholesale drapery trade, have just removed into new premises, viz., The Fort House, Hornby-road. Their store now occupies a floor space of over 50,000 square feet. The second floor, measuring over 10,000 square feet, has been set apart for a china, glass, and hardware department, which is a new feature of the store.

Glass Wanted in Australia.—An Australian, at present in London, wishes to secure the representation of United Kingdom manufacturers of plate, sheet, mill-rolled, and fancy glass ; also of United Kingdom manufacturers of best quality bevelled mirrors. Communications regarding either of the foregoing inquiries should be addressed to the High Commissioner for Australia, 72, Victoria-street, S.W., mentioning THE POTTERY GAZETTE.

New Clay Deposits in S. Africa.—H.M. Trade Commissioner for South Africa reports that, according to information received from the Commissioner of Customs and Excise at Pretoria, an excellent clay has been found near Bloemfontein, suitable for the manufacture of the best type of bricks and tiles. Application to lease this particular site has been made to the Town Council, and machinery is stated to be already on hand.

Canadian Imports of tableware of china, porcelain, white granite or iron-stoneware during 12 months ending March, 1913, amounted to the following values :—U.K., $1,470,349 ; U.S.A., $36,826 ; Austria-Hungary, $76,168 ; France, $174,431 ; Germany, $303,325 ; Japan, $89,088 ; total, $2,166,163. Other earthenware and china amounted to :— U.K., $462,069 ; U.S.A., $547,533 ; Germany, $39,056 ; Japan, $14,280 ; total, $1,099,017. The figures show an all-round increase.

Tiles Wanted in Canada.—H.M. Trade Commissioner for Canada reports that a company in Toronto wishes to get into touch with United Kingdom manufacturers of hand-made roofing tiles, for which there is said to be a possibility of considerable business. The name and address of the company can be obtained by United Kingdom manufacturers of roofing tiles on application to the Commercial Intelligence Branch, as above. Any further communications should be addressed to H.M. Trade Commissioner, 3, Beaver Hall-square, Montreal, mentioning THE POTTERY GAZETTE.

New Zealand Pottery and Glass Imports.—The report of the Imperial Trade Commissioner for 1912 states that in china we have 65 per cent., Germany 20 per cent., and Japan 4 per cent. of the trade ; total value, £47,996. The United Kingdom has a small net gain on the year. In earthenware the increase of our share from £95,000 to £98,000 is slightly greater than the increase in the total import, value £108,960. Bevelled plate glass £5,961, and mirrors £8,154, show small totals, of which we have about three-fifths. In glassware our figure of £7,400 out of £37,800 shows a net loss on a slightly reduced import.

Import Trade of South Africa.—H.M. Trade Commissioner reports that in all high-class goods of earthenware and china the trade of the United Kingdom preponderates, but a very large quantity of cheap earthenware is imported from Germany for the Dutch population, and in connection with the native trade. The total import in 1912 was valued at £150,741, the share of the United Kingdom at £104,121, and that of Germany at £34,813. The import of glassware was valued at £63,187, and that of glass bottles and jars at £125,909. Both these totals, like that of pottery, are on the increase. Germany contributed some glassware, and Sweden £12,086 worth of bottles and jars. Belgian trade in window glass and cheap glassware is very strong, accounting for : window glass, £16,174 ; glassware, not elsewhere included, £15,411 ; glass bottles and jars, £13,668 ; plate glass, £8,291.

CANADIAN GLASS IMPORTS.

CANADIAN imports of glass during the 12 months ending March 31st, 1913, according to a return just published, were as follows :—

Balls and cut, pressed or moulded, crystal glass tableware, blown glass tableware, and other cut glassware : United Kingdom, $47,307 ($43,314) ; United States, $429,923 ($353,755) ; Austria-Hungary, $53,666 ($34,163) ; Belgium, $43,228 ($35,885) ; Germany, $64,681 ($45,746) ; other countries, $37,920 ($26,667) ; total, $676,725 ($539,530).

Carboys or demijohns, bottles, decanters, flasks, jars, and phials : United Kingdom, $74,704 ($85,461) ; United States, $392,993 ($269,436) ; Austria-Hungary, $7,798 ($3,938) ; Belgium, $3,189 ($15,753) ; Germany, $61,962 ($80,270) ; Holland, $15,186 ($15,674) ; other countries, $7,604 ($8,073) ; total, $563,436 ($478,605).

Common and colourless window glass : United Kingdom, $491,904 (415,724) ; United States, $380,460 ($83,115) ; Belgium, $695,796 (755,535) ; other countries, $8,184 ($6,154) ; total, $1,576,344 ($1,260,528).

Lamp chimneys, glass shades or globes : United Kingdom, $7,789 ($4,164) ; United States, $360,923 ($275,275) ; Austria-Hungary, $18,394 ($12,512) ; Germany, $35,211 ($29,813) ; other countries, $2,421 ($1,146) ; total, $424,738 ($322,910).

Plate glass, not bevelled, in sheets or panes : United Kingdom, $664,245 ($502,677) ; United States, $80,322 ($33,990) ; Belgium, $419,874 ($267,986) ; France, $11,618 ($27,595) ; other countries, $21,114 ($23,460) ; total, $1,197,173 ($855,708).

Other glass : United Kingdom : $222,860 ($147,439) ; United States, $447,763 ($307,211) ; Germany, $70,150 ($64,291) ; other countries, $143,501 ($124,064) ; total, $100,274 ($634,005).

Recapitulation.—Glass, and manufactures of : United Kingdom, $1,508,809 ($1,198,779) ; United States, $2,092,384 ($1,322,782) : other countries, $1,721,497 ($1,578,725) ; total, $5,322,690 ($4,100,286). The figures in brackets show the imports for the corresponding period of 1911-12.



THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE 1913-14 session of the English Ceramic Society was inaugurated by a smoking concert, held at the North Stafford Hotel, Stoke-on-Trent, on Friday evening, September 19, when a goodly number of the members met together in companionable vein under the happy chairmanship of Mr. J. P. Holdcroft, a popular vice-president. The time passed all too quickly.

The following evening, in a more serious turn of mind, their steps were directed towards the Hanley Municipal Secondary School, where Dr. W. R. Ormandy led off the work of the season by a lecture dealing with

"THE BEHAVIOUR OF SOME ENGLISH CLAYS UNDER THE OSMOSE PROCESS."

This contribution might be described as Part II. of his work on "The Purification of Clay," the first moiety having been delivered in November last, and having already been noticed in this Journal, vide our issue of December, 1912.

In the absence of Sir H. Cunynghame, the Society's new president, who was unavoidably detained in Glasgow, Mr. C. W. Thomas, who has just relinquished the office, occupied the chair, and quickly paved the way for the lecturer.

Dr. Ormandy, who was well received, referred briefly to his previous visit to the Society, when it was his privilege to bring before their notice for the first time the Osmotic method for the purification of clays, but at that time he laboured, he said, under the severe disadvantage of having nothing to show them except products which had been produced by the treatment of Continental clays, and, however much clays might resemble one another, it would, he thought, take more than an ordinary mortal to persuade the average English pottery manufacturer that his clays would behave the same as anybody else's. Therefore, it was absolutely necessary that one should investigate a considerable range of English clays before endeavouring to deal with the subject from a commercial aspect. Owing to the fact that these samples had all to be sent to Germany, a considerable space of time had been occupied in getting the results. Now, having got a certain number of samples, he hardly knew which aspect of the subject to treat of that evening. He reminded the meeting that he was there at short notice to fill a gap created by the unavoidable absence of Sir H. Cunynghame; the notice he had received had been short, and, in consequence, he was unable to bring forward certain results which he had hoped to do dealing with the fractional precipitation of china clays. Independent of those results, however, there was matter sufficient at his disposal, he thought, to constitute a lecture of sufficient interest to justify his appearance at this juncture. He proposed first of all to deal with certain work which had been done on china clays.

The methods of mining china clay in this country and on the Continent differed to a considerable extent. For the most part the china clays of Austria and Germany were mined, and then washed and filter-pressed; in this country they did not mine the clay; it was generally washed down the sides of the pit, and then pumped with large amounts of water through the micas, allowed to settle, dug out when it reached about 50 per cent. concentration, and put on the "dries." The consequence of this was, of course, that it was not quite as possible in this country as it was abroad to keep separate the various layers or deposits which differed very considerably in quality That perhaps had something to do with the ability of certain of the foreign producers of china clay to deliver a material which, for the manufacture of hard china at any rate, was considered superior to any of the English products.

In order to test the Osmose process thoroughly one of the largest producing firms of china clay was kind enough to send them seven 3-cwt. barrels of seams of china clay, which were absolutely "unworkable"—if one might use the term—and which had to be regarded as overburden, and removed before the rest of the clay was treated by the normal method. Samples of these seven qualities were on the table at the present moment for inspection. In regard to one of these, marked No. 7, a rather interesting thing happened. When it was received in Germany, placed in water and allowed to settle, the man who was working on it came into the office in great haste and remarked, "They have made a mistake. It is not china clay they have sent us, but Indian ink." And the suspension certainly did bear a close resemblance to that product. As far as one could see from a very cursory examination, the colour was due to the presence of very finely divided tourmaline, which was sufficiently definite in its crystalline appearance as to be distinguishable under the microscope. This particular clay, separated by the Osmose process, gave a product which was to be appraised at about 26s. a ton for paper-making purposes, but when burned was just inferior to a china clay such as that which came under the heading of a standard china clay of first quality. Out of the seven samples which had not been considered commercial, there were at least four of them which were good clays when burned. Sample No. 6, which had been regarded as a china clay, was not a china clay, but a ball clay. In regard to the sample marked as No. 5, which was quite a deep yellow and, as a matter of fact, burned yellow, it was interesting to note that when subjected to the Osmose process, or a modification of it, it was possible to have the yellow material removed. It transpired that the yellow colouring matter was in a much more finely divided state than anything else that was present in the material, but by a method of fractional precipitation, which he would not like to say could be carried out on a commercial scale, but which gave prospects of being worked into a commercial process, it had been proved possible to remove the colour, so that the resulting product would be a suitable one for pottery manufacture. The yellow colouring matter had, in fact, been isolated, and proved to consist of iron and phosphate. That it was phosphate of iron was clearly established, but whether some other material was present at the same time had not yet been investigated.

From china clays, then, which, in their natural state, were unusable, it was possible to isolate bodies which were useful for pottery purposes, though it was much more difficult to remove the yellow and the brown colouring matter due to the presence of this phosphate of iron and humic substances. Certain of the green and bluish china clays were much easier to treat, because the colouring matter in such cases apparently consisted of tourmaline or double silicates containing a certain amount of iron, which were either neutral electrically or electro-positive. Consequently, out of the blue and green clays it was possible to separate paper-white clays, but out of the yellow clays it was not possible to extract a clay suitable for paper-making purposes. These were the limitations of the process, at the present moment.

There was a point upon which he was not sufficiently acquainted with porcelain manufacture to be able to speak of with any degree of certainty, but he was told that the English china clays were not suitable for the manufacture of hard porcelain. He was told that the test which was most relied upon in Germany for the suitability

of a china clay for hard porcelain purposes was the contraction of the sample when burned at 1500 deg. C. Some of the most expensive Continental clays would show a contraction of 17 per cent. at 1500 deg. C. The bulk of the English china clays showed a contraction of 10 to 12 per cent. only. But the clays which had been separated by the Osmose process from the English clays at 1500 deg C. gave contractions of 15 to 16 per cent. Certain of the china clays from Georgia and South Carolina had given contractions as high as 19 to 20 per cent. Where the contraction had been about 19 per cent. analysis had generally shown that the percentage of alumina was in excess of that required by theory for pure kaolinite. He was also astonished when told that the question of the colour of china clays for hard porcelain was not so important as for china clays required for pottery making at a lower temperature, the explanation given being that at the temperature employed in the manufacture of hard porcelain the iron which was present either got into a state of combination in which it exerted no colouring effect, or was actually driven out; he would not like to say that it volatilised, but one could only draw these two conclusions. It struck him, said the lecturer, as being an interesting point, but he did not know whether the hard china referred to was made in England to any appreciable extent.

Coming to deal with the samples exhibited on the table, he explained, parenthetically, that the object of the trials was to see what class of product was obtained by the Osmose process as compared with the products resulting from the everyday process. He would just say, in reference to the further results which he hoped to have at his disposal in the course of three or four months, that some of the high grade china clays when brought into suspension, mixed with a small amount of electrolyte and allowed to settle, deposited as much as 20 per cent. of their weight of material which was not electro-negative, and which therefore did not collect on the anode. The clay which was then separated by the Osmose process was much more plastic, was better in colour, and had a much higher contraction. But the question arose as to whether there was a demand for a product which was more expensive to produce, owing to the fact that after they had gone through the ordinary commerical washing process they found they had removed 20 per cent. of the material which was apparently not china clay. That, of course, was a matter which would have to be settled by the ordinary course of commercial events later on. The difficulty of dealing with the English china clays was this: the mines were fairly remote generally from the railway station. At the present time, after the bulk of the heavy silica was washed out, the clay, mixed with about ten times its weight of water, passed on to the settling tanks. It would be impossible to send the purified clay from the pit to the railway station at anything like the cost at which it was possible to send the suspension travelling down by gravity, the water only being passed back again where the original supply was not adequate without pumping. In order to cope with the position which thus arose the Osmose process had been modified, and the modification had resulted in the production of an instrument which would possibly be of value, he thought, and at any rate of interest, to potters generally. They all knew and doubtless appreciated the difficulty which arose in the treatment of "fat" or plastic clays by means of the filter-press. A modification of the ordinary filter-press had been made, consisting of ordinary plates, separated from one another by means of wooden sections in order to make a chamber, say, 3 c.m.—an inch and a fifth—in thickness. Instead of using a pressure of 60 to 100 lbs. to the square inch, the alternate plates were connected to a negative and a positive pole of an electric circuit at a tension of 60 to 80, and by this means it was possible, with a pressure of 10 lbs. to the square inch at the outside, to fill such a filter-press in fifteen to twenty minutes, getting a cake left which contained very much less water than the clay could be reduced to, using very much higher pressures in a very much greater length of time in the usual type of press. Of course, such an application of the Osmose water separation did not lead to any purification; it was not a modification of the Osmose process in so far as it related to purification, but only in so far as it dealt with the separation of the water from the magma which was pumped into the chamber. That was an instrument which had been discovered since he last described the process, and which was still being developed, but he thought it gave promise of being useful in cases where it was found necessary to filter-press mixed materials, and it would be an advantage because the press could be filled in a very few minutes, and gave a product which was drier than that obtainable at present, especially when there was a large percentage of plastic material in the mixture being pressed. He did not propose at this stage to deal any further with the subject of china clay, but would proceed at once to the treatment of ball clays.

A slide produced showed the results of the treatment of a number of ball clays. A double column showed the analyses respectively of the clays as sent out and after purification, the melting point in Seger Cones, the sintering temperature in degrees C., the yield of the clay, not counting the residue as usable, and the number of kilowatt hours on the experimental clays. One could always assume that on a commercial scale the number of kilowatt hours would be 25 per cent. less than those employed on the smaller machines. The slide showed the results of the treatment of both Devonshire and Dorset ball clays by the Osmose process, some of which were really astonishing, for it must be borne in mind, as the lecturer pointed out, that the samples were not of good ball clays, but of materials which at present were either of very low value commercially or absolutely unusable, and they had been sent to him with the object of ascertaining whether they could be transformed into a usable and commercial product. A comparison was afforded of the results with one of the best Dorset ball clays and a sample from a property which had not yet been developed, and where the turf was merely lifted and a spadeful taken. The lessons to be learned from the results would, of course, be much more obvious from an inspection of the samples than any chart could possibly be, and therefore the lecturer refrained from labouring the figures, preferring to send round a sample of ball clay in a raw state, obviously quite incapable of being used in that form, and at the same time a sample of the purified clay obtained therefrom, and which was now considered to be a good product. He would call special attention to the resemblance of the untreated high grade ball clay with the purified low grade one.

When the members, after the lecture, came to inspect the samples as they stood in bulk upon the table, he would like them to notice that they were arranged in this way: First the standard ball clay, and next to it the surface clay from the same deposit, which contained a very large amount of iron. The surface ball clays were practically permeated with red seams containing iron, and although it was possible to reduce the iron by the Osmose process to a point at which one would think the amount left in would not result in a colouration of the body, the fact remained that the burnt product was much worse coloured than some of the deeper ball clays, even though the latter contained a large amount of iron from the point of view of the ordinary analysis. Obviously, then, it was not a case of how much iron was in the clay, but how it was combined with it.

Arising out of the treatment of ball clay there was a side issue which he would like to refer to for a moment, although it was somewhat remote from the general interest of the Ceramic Society, and that was the possible application of a clay so treated to the manufacture of paper. At the present time, china clay was used for paper-making on account of its purity and whiteness, and owing to the absence of iron pyrites. But samples were available on the table of paper-making clays made from (1) Peacock marl, obtained from a Stoke-on-Trent marl hole; (2) a local red plastic clay; (3) a Scotch fireclay; and (4) ball clay. Now many of these surface or ball clays which burned out such a colour that they were not applicable in the ceramic industry, were, in themselves, very white. It did not follow that because a ball clay was white as it occurred in nature it was going to burn white, and yet, after purification by the Osmose process, some of these clays were as white as china clays, and he thought there was very little doubt that they would compete eventually with china clays for the paper industry. Two samples of paper were produced, the one being made with a low-grade china clay, such as was used in the manufacture of paper employed in the printing of daily newspapers, and the other being made from one of the waste ball clays, alongside of which was placed a piece of the same ball clay burned, and which it would be seen was very yellow—so discoloured in fact, that it would be useless to look for a market for such a clay in the pottery districts.

At some length the lecturer here referred to the physical behaviour of clays before and after treatment by the Osmose process, the observations recorded having been the result of some 60 test of clays, and the data including the percentage of alumina and iron, the amount of water, the melting point, the contraction of the raw and finished clays respectively, and the amount of water absorbed. It would be seen that at 1410 deg. C. a commercial ball clay was approaching the vitrifying stage. He would be able to refer to figures dealing with ordinary fireclays and shales, from which it would be seen that the contraction went up steadily right away to 1500 deg. C., and, though his experiments could not be carried out beyond that point, there was every indication that the contraction would proceed to a point very much higher than that. The fireclays, moreover, showed after treatment exactly the same property as the ball clay after treatment. The contraction would appear to progress very rapidly until it reached a point at which, theoretically, there was no contraction possible. It had been claimed that the sintering temperature marked the commencement of the melting point, that it was due to a chemical change which started and continued, and as it proceeded more and more rapidly, evidenced itself in the clay giving way altogether, and becoming soft, in other words, melting. He (the lecturer) would rather say that the experiments on clays which were entirely deprived of free silica pointed to some other explanation. In the cases where the whole of the free silica, especially the extremely finely divided silica, had been removed, the curve of contraction was peculiar, and from experiments made and the results obtained, it would appear hard to believe that a chemical change which started at say, 1000 deg. C., and resulted in the vitrification of a clay at 1160 deg. C., should be the commencement of a chemical change eventuating in the melting of that clay somewhere about 1,800 deg. C. It seemed to him to be much more likely that the first vitrification was either due to a chemical change which was completed at the point of vitrification, or was due to what might be called a merely physical agglomeration of the particles. It was a point which was open to debate, but it seemed to him that the experiments carried out with the silica-free clays pointed in that direction, and it had, of course, been impossible to conduct such experiments previouly, because it had been impossible to get clays which had not a certain proportion of free silica in them. The view advanced seemed to be borne out by certain experiments which the lecturer detailed, and which went to show that it was possible to influence the contraction enormously by the introduction of very small amounts of inert material, if that inert material were sufficiently finely divided.

The concluding portion of the lecture was concerned with experiments conducted with fireclays. Dealing first of all with Dudley fireclays, the lecturer observed that the whole of the Dudley clays were very "fat" clays to start with, and were primarily used in the manufacture of retorts and of crucibles such as used in Sheffield. The amount of iron, generally speaking, in the purified clays, was approximately the same as that of the Devonshire ball clays, and somewhat higher than that found in the best qualities of Dorset ball clays. After "Osmotic" purification of these Dudley clays, products resulted. three samples of which were produced, which, in their alumina contents, very closely approached high-grade ball clays, and much higher than the ball clays as usually found in nature. The finished "Osmose" product, as would be seen from the sample handed round, was about equal in colour, whilst it was equal in contraction to the "Osmose" ball clays, and considerably better than the raw ball clay as found in nature without separate washing. The melting points as a rule went up one or two cones. There was a case—the sample was produced.—where it actually reached cone 35, the figure being attested by independent experiments made by chemists in Germany and at the County Pottery Laboratory at Stoke-on-Trent, the samples in each case having been submitted under a fictitious title.

As a general rule shales, as distinct from plastic clays, required less current. They were of old formation, found deeper down, and the organic salts which were present in the superficial clays had, in these deeper clays, in the course of ages, been removed, leaving them much more amenable to treatment. The efficiency of the process compared to its application to the best china clay when working on some of these Staffordshire clays—amongst which there were local marls taken from the big marl hole in Hanley—was from 28 to 30 per cent. The iron of the latter was much the same as the Dudley clays, the melting point was lower, the sintering temperature much the same, but the yield, unfortunately not quite so good, indeed, in one case pretty bad, were it not for the fact that the residue could be divided into two or three portions, some of which were clean enough when burned to be used as grog. The extraordinary thing was that so many clays which resembled one another very closely indeed in their chemical analyses differed absolutely in the contraction at the point of sintering. It was a matter which required a great deal of investigation, he thought, because in a case under review at the moment they had a clay which was almost exactly the analysis of a chemically pure china clay, but which only contracted 10 per cent. at the point of sintering, whereas a china clay, having the same amount of iron within ·2 per cent., contracted 15 per cent. before it sintered. He was perfectly conscious of the fact that he was laying up for himself a rod in pickle, because Dr. Mellor had already told him that he held a different theory in regard to sintering.

At this point the lecturer dwelt with some emphasis upon the results obtained with local clays, because he felt sure they would have a special interest. In the big

marl hole at Hanley there was what was known as the "Peacock" seam, whilst, lower down, there was a black clay which had only been used for the manufacture of "bastard" or low-grade firebricks. Both of those clays had been treated in ton lots and products made from them. One of the points of great interest was to know how they behaved as regards contraction, particularly as tests has shown that the black clay vitrified at 1160 deg. C., which was below the temperature at which the products were required to be burned in an ordinary sanitary ware furnace. In purifying this clay it was thought advisable, in view of this low vitrification, which was not desirable, to stop the process before the whole of the silica was allowed to separate, and that the desired result was achieved was shown by six samples produced, and the various properties of which were shown to be quite remarkable.

Mr. Howson, said the lecturer, had been kind enough to say that those members who were sufficiently interested would be able to see at his works samples of wash basins and full-sized articles made from this local marl, to demonstrate that it was, at any rate, possible to so arrange the proportions of grog as to approximate the contraction of the material to that which they were using. In fact, the "Peacock" marl, after purification, was considerably better than the clay at present being employed. That being the case, it was not worth while purifying an expensive clay when from a low grade clay it was possible to get a better result than the clay now in use. He would like the members to notice that the "Peacock" seam burned at 1250 deg. C. was like a piece of stone, absolutely vitrified. A table here produced, headed "A comparison between china clay, ball clay and fireclay" would, the lecturer thought, be sufficient to show that there was something behind all this to account for the vitrification. It was not merely a case of chemical constituents as shown by analysis, but state of division had obviously a lot to do with it.

One of the most interesting points in the whole series of samples was with regard to the Scotch clays. In a somewhat humorous vein the lecturer told how a certain gentleman—a Scotchman—sent him some samples of clays for treatment which were pretty good in quality—the materials he was at present employing. They were sent with the object of seeing what the results would be like when purified. The results were too good, and the gentleman was inspired with the idea that it would be possible to get a usable material from a less valuable product, and accordingly fresh material was submitted. The results were still too good. The gentleman evidently thought that if, from a comparatively cheap product, and that meant a product which cost somewhere about 3s. a ton in Scotland, a final result could be achieved such as the one before him, then it ought to be possible to get something for nothing which would give quite tolerably good results. The identical products were handed round to the members for inspection.

Finally, the lecturer referred to experiments which had been made with a waste product thrown out from an iron mine. Fifty tons of this material was wasted at this particular mine daily, being considered absolutely useless. He thought he would be right in saying that there were a number of people in the Potteries who would be glad to get hold of it. The peculiar behaviour of clays under the Osmotic process, i.e., the melting point going up and the sintering point going down, was, of course, exceedingly valuable when it was required to make vitrified bodies such as flooring and roofing tiles. In the case of the material in question, it would be absolutely useless in its present form to the manufacturer of vitrified goods, because the sintering and melting temperatures were so close together that the clay would fall as soon as it became vitrified, whereas the constituents when subjected to the Osmose treatment led to about 150 degrees being placed between the sintering temperature and the melting point, which was adequate at any rate for the burning of vitrified bodies, and doubtless even the average fireman would be able to keep within a range of 150 deg. C.

The lecturer was heartily applauded at the conclusion of his discourse, and several enconiums were voiced. There was the customary discussion, in the course of which Dr. Mellor, taking up the cudgel which Dr. Ormandy had thrown him, advanced his theory in regard to "squatting," and several interesting questions were answered by the lecturer.

A vote of condolence with the family of the late Mr. Solon was, at this, the first meeting of the Society since that regrettable event, feelingly proposed by Mr. J. P. Holdcroft, seconded by Dr. Mellor, and passed in silence, the members showing their acknowledgment by standing.

Obituary.

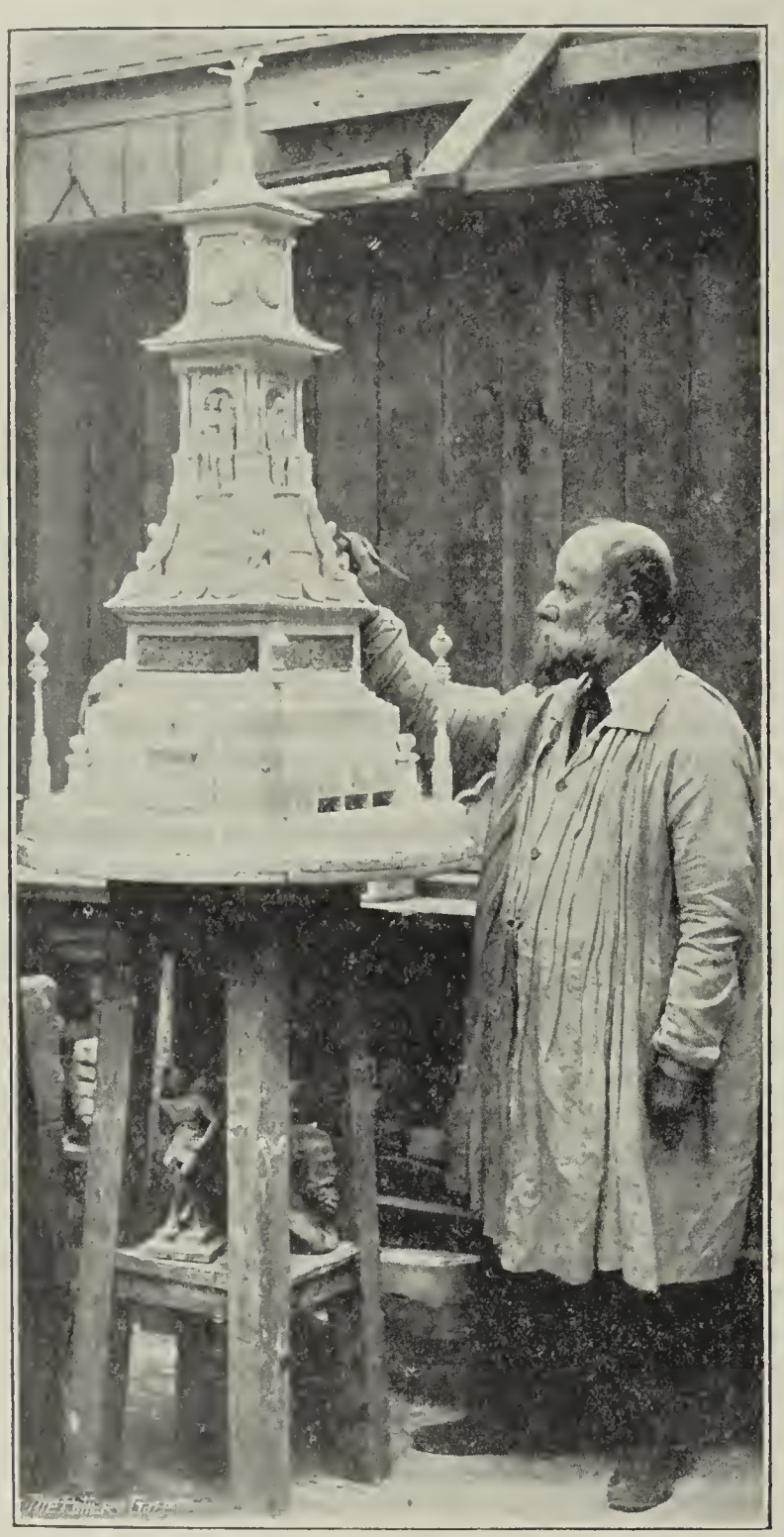
GEORGE TINWORTH, Aged 69.

NOT quite arrived at the Psalmist's term of years, George Tinworth has passed to his rest. The well-known modeller—so long associated with the firm of Doulton—was travelling by his usual morning train from his home at Kew to the Royal Doulton Potteries, on Wednesday, Sept. 10, when, on the arrival of the train at Putney, he was found to be dead. The compartment in which he had travelled had had no other passenger, and it was uncertain, therefore, at what moment death had taken place. The huddled form was found still seated, with the head dropped to the knees. A doctor was hastily summoned, but could only pronounce life extinct. Two days afterwards an inquest was held at Wandsworth Town Hall. The proceedings were quite brief. The deceased's sister-in-law stated that Mr. Tinworth had had no illness recently, except for a slight cold three months before, but he had been worried recently by some slight causes, and had left for business on the last morning rather against advice and with his breakfast scarcely touched. A post-mortem examination revealed an old heart trouble which, accentuated by possible hurry and worry, was sufficient to cause a fatal ending, and a verdict of "Death from natural causes" was accordingly returned. The body was interred on Monday, Sept. 15, at Norwood Cemetery, in the grave where his mother had been laid as long ago as 1881.

In the passing away of George Tinworth, the pottery world has lost one of its famous artists—as famous in his way and in his associations with the firm of Doulton as was Flaxman in his time with Wedgwood. In one sense Tinworth was more truly a ceramist than Flaxman, for he practically did no other work of importance than that which, during 46 years, he modelled and decorated for the Doulton kilns. Loyally, too, was he supported by his firm, for he was given a practically free hand, and, subject only to such stipulations as the requirements of clients must impose, his inspirations were in no way fettered. It may be said, indeed, that now and then he would delightedly work out some pet idea which it could be seen would not be immediately profitable to his employers. Burdens and occasional "lean times," which would have broken the spirit of a sensitive artist such as he, were often considerately kept from his knowledge by his employers.

The facts of Tinworth's life have already been told in THE POTTERY GAZETTE and elsewhere. He was born at Walworth, in 1843, the son of a wheelwright, and, until he had attained manhood, worked at his father's trade. In such leisure moments as he could snatch, he busied himself in little carvings, but these efforts were not regarded with favour by the head of the family. Too much, however, has perhaps, been made of this discouragement of the lad's artistic strivings. George Tinworth will not have been the first genius to be misunderstood at home.

In the issue of this Journal of February, 1911, we referred to Mr. Tinworth's leanings towards scripturally



MR. GEORGE TINWORTH
At work on his model for a Shakespeare Memorial.

inspired sculpture, with which his name will doubtless long remain associated. To his good mother Tinworth was indebted for an intimate knowledge of the Bible, which, throughout his life, remained his chief storehouse of ideas and images.

When nearing twenty years of age, and still a wheelwright, Tinworth heard of the Lambeth School of Art, which, with Mr. John Sparks as Principal, had not long been in working. The first public act of the then Prince of Wales was to lay the foundation stone of a new building at Vauxhall to accommodate the growing school, and it was here in the evening classes that young Tinworth, after a romantic encounter with Mr. Sparks, soon found himself working with feverish energy, acquiring the technique of modelling. His progress was rapid and successful, although terribly hampered by the complete severance of his ordinary daily work from the engrossing evening art studies. At the end of 1864 he was admitted to the Schools of the Royal Academy, and two years after was an exhibitor in the Academy with a little group entitled "Peace and Wrath in Low Life," a subject that bore but little relation, if any, to his academic studies.

In 1867, Doulton & Co., of Lambeth, were turning their attention to the production of more decorative forms of stoneware than had hitherto been the rule. Tinworth was persuaded to join them as a modeller, and remained there till the last. His work at Lambeth has been so often referred to that we will not do more just now than to say that his successes there have made his name famous throughout the length and breadth of the ceramic world.

By way of diversion from his serious works, Tinworth often produced little figures and models, frequently of humorous type—such are his Chessmen, his Cockney Mice, the set of Boy Musicians, and Boy Craftsmen, while his characteristic freely incised decorations for Doulton ware vases have long been familiar to lovers of ceramics. As for honours, Mr. Tinworth was too modest to set much store by them. His panels, however, as shown at various exhibitions, international and otherwise, brought many recognitions flattering to himself and to the firm by whom he was employed. It has been pointed out elsewhere that Tinworth was a modeller on whom the chains of academic training laid but lightly, As Ruskin said, his work was "full of fire and zealous faculty, breaking its way through all conventionalism to such truth as it could conceive," and there is no doubt that the unconventionalism and strong note of personal sincerity so evident in Tinworth's work were largely due to the environment of his youth. What he learned as an artist was gained in the hard, stern school of life. And can there be a better ?

We offer our condolences to the members of his family who are left to mourn him, and to the firm who has lost so eminent a craftsman.

MR. C. W. M'NAY, Aged 68.

WE regret to record that Mr. Charles W. M'Nay, J.P., senior partner of the firm of C. W. M'Nay & Sons, earthenware manufacturers, Bridgeness Pottery. Bo'ness, died very suddenly at his residence, Cardene, Bo'ness, on Sept. 15. Mr. M'Nay and his elder brother, who died some years ago, were originally connected with the once well-known firm (now extinct) of John Marshall & Co., of the old Bo'ness Pottery. In 1887 Mr. M'Nay severed his connection with the firm and erected a large and well-equipped pottery in the east-end of the burgh, where he soon built up an extensive business in the home markets. By reason of his wide connection and from being so long on the road, Mr. M'Nay was one of the best-known personalities in the general earthenware trade in the Scotch and Irish markets ; and in business circles, as in private life, he was held in high esteem and respect. Twelve years ago he assumed as partners his two eldest sons, and four years later he practically retired from business. At one time Mr. M'Nay took an active part in public affairs, but business taking him so much from home he relinquished his various offices. He was one of the trustees of Craigmailen United Free Church, and a Justice of the Peace for the county of Linlithgow. Mr. M'Nay, who was 68 years of age, leaves three sons, all of whom are connected with the business.

THE EMPLOYMENT OF GOLD IN CERAMICS.

(SPECIALLY ABSTRACTED.)

(*Concluded from page* 1050.)

ROSE PURPLE.—A solution containing 1 grm. of gold (as chloride) is mixed with one of 50 grms. of alum, and treated with 1·5 grm. of stannous chloride in the state of a solution of sp. gr. 1·7 followed by the addition of ammonia as long as precipitate continues to form.

The purple being a lake, other supports than tin oxide an be employed, such as antimony, the sub-chloride of hich will displace gold, and also forms an oxychloride apable of forming a support for the precipitated gold. o precise data, however, are known as to the method f working. Magnesia may be used for the same purpose y boiling a dilute solution of gold chloride along with ashed precipitated magnesia. The lake comes down s a yellow powder, and, on calcination, furnishes anydrous magnesia impregnated with finely divided gold, orming a powerful pigment. Alumina is also a suitable pport for the gold lake, and gives a more powerful pigent than magnesia. Muller's recipe consists in dissolvg 92·13 grms. of potash alum in water and adding gold loride containing 0·5 grm. of metal, followed by potasum carbonate solution until a strongly alkaline reaction produced. On heating to near boiling, the precipitate, hite at first, turns pink, whereupon it is filtered, dried, nd gently calcined, which darkens the colour and imparts brownish tinge. Good results may also be obtained by recipitating gold in presence of kaolin rich in kaolinite. hus, Lavezard recommended triturating, say, 24·5 grms. kaolin in 8 litres of water, and passing it through a very ne sieve to ensure uniform distribution of the particles. he mass is treated with gold (0·5 grm.) in the form of loride, and precipitation is effected by means of stannous loride solution (2·5 grms. of tin), added drop by drop, ne gold forming a purple lake. Still another formula r gold purple is to reduce gold chloride by boiling it ith glycerine (10 c.c. to each grm. of gold chloride).

The variations among these formulæ indicate that the ill of the operator is an important factor. The preference ven by modern authorities to stannous chloride over the ixed salts is easily explained by the fact that stannic loride is formed in the liquid itself when the gold begins come down, so that its intentional introduction into ne liquid is superfluous. These purples are not all of ne same class, those containing tin being suitable for the reparation of colours which have no need to be transarent, whereas those for enamels must not contain any bstance (e.g., tin) capable of affecting that property. o obtain deep shades, the ingredient forming the support ust be in only small proportion, whereas its quantity is creased for light shades. In the former case, for tin urples, 4-5 grms. of tin in the state of stannous chloride ay be taken to each 1 grm. of gold, but for light shades ne weight of tin may be 10 times that of the gold.

FLUXES AND COLOURS.—The class of flux employed is y no means a matter of indifference. Brongniart's rmine flux consisted of fused borax 55·55 parts, quartz nd 33·33, red lead 11·12 parts ; purple flux, crystallised oric acid 50 parts, quartz sand 12·50, red lead 37·50 rts ; violet flux, boric acid 27·50, quartz sand 5, red ad 67.56 parts. The purple flux, however, gives violet nes when used alone, but may be modified by the addition silver chloride. To prepare violet shades, he recomended mixing equal volumes of purple of Cassius, still oist, and violet flux. For purples, $1\frac{1}{2}$ volumes of purple ux were taken to 1 of gold purple, and a small quantity of silver chloride was added. For carmines, the damp purple was mixed with three times its own bulk of carmine flux and a little silver chloride, the whole being finely triturated. This method of working is less exact than when the quantities are weighed out, but the difficulty can be overcome by using a standardised purple, taking a fixed quantity of gold and employing a constant volume of water, the whole being well shaken up for use, and a definite volume removed by means of a pipette to mix with a certain weight of flux.

Wachter proceeds in a somewhat different manner. For dark shades he follows the method of preparation given above, and mixes the precipitate with 0·5 grm. of silver carbonate and 10 grms. of a lead flux prepared from quartz sand 20 parts, calcined borax 25, red lead 50 parts. For light shades 10 grms. of flux and 3 grms. of silver carbonate are taken, and by omitting the last named an amethyst shade is obtained. For rose purple he takes 70 grms. of flux and 5·2 grms. of silver carbonate. On analysis, the Brongniart carmines are found to be different in composition from those of English origin, and since these are renowned for their beauty, the fault resides in the fluxes used by Brongniart. Lavezard found an English carmine to consist of silica 48, tin oxide 0·50, lead oxide 15·90, gold 0·30, silver 0·07, alumina 7·20, boric anhydride 15·50, potash 1·20, soda 9·10, lime 2·19 parts. This preparation could be obtained from the following ingredients :—Borax 22·36, feldspar 9·82, gold 0·30, silver 0·07, tin 0·40, red lead 16·38, kaolin 14·60, quartz sand 34·32, dry carbonate of soda 3·21, chalk 3·51 parts. The gold and tin would be introduced in the state of purple, the silver by means of a special flux, whilst the kaolin would be used as a support for the precipitation of the purple. This would leave the flux to be composed of borax (fused) 22·36, feldspar 9·82, red lead 16·38, quartz sand 34·42, anhydrous carbonate of soda 3·21, and chalk 3·51. By taking a portion of this flux and fusing it with 2 per cent. of silver dissolved in nitric acid, a 2 per cent. silver flux is obtained. The kaolin lake can be made by using the above quantity of kaolin and precipitating the gold on it by means of the specified quantity of tin in the state of stannous chloride ; or a purple-kaolin lake of known composition can be used instead, if the necessary correction be made. Owing, however, to fluctuations in the physical condition of the components, it is not always possible to obtain the same results, even when working with predetermined quantities, so that trials must be made. If an excess of pigment be introduced with the kaolin lake in order to have the right amount of kaolin, then a smaller quantity of lake must be taken, and the deficiency in kaolin must be made good separately.

ENAMELS.—These are lead glasses in which the pigment is dissolved instead of being held in suspension ; that is to say, the enamel must be transparent. For Oriental or "new" Sèvres porcelain, the enamels can be applied as in the case of Chinese porcelain.

Pink enamel is prepared from flux 80 grms., 2 per cent. silver flux 30 grms., purple of Cassius suspended in water (1 grm. per litre) 15 c.c., the whole being mixed by trituration. The flux consists of siliceous sand 30·64 parts, red lead 45·20, plastic kaolin 19·34, chalk 5·65 parts, fused together at the temperature of No. 014 cone. Ruby enamel is obtained by increasing the amounts of purple and silver thus : Flux 80 grms., 2 per cent. silver flux 53, gold suspension as above 93 c.c.

COLOURED GLAZES.—Hecht recommends the preparation of a standard solution of gold chloride, preferably 1 grm. of metal per 100 c.c. of water, the solution being as nearly neutral as possible. The desired quantity of gold is then mixed in this form with the syrupy glaze, preferably in a large capsule which can be heated. Whilst the mixture

is being stirred with a glass rod, a suitable reducing agent, such as grape-sugar solution or glycerine, is added by drops. after the mixture has been rendered alkaline with a few drops of sodium carbonate. Gentle warming causes the mass to turn pink, through the reduction of the gold, and when cold the preparation is repeatedly washed by decantation.

With 0·1 part of metallie gold per 100 of dry glaze, a deep red glaze is obtained. The colour develops far better in the absence of lead, in which case 0·01 per cent. of gold is sufficient to give a delicate rose pink. A yellow-rose shade is obtained by mixing a glaze containing 0·0033 of gold with a uranium glaze, and the presence of boric acid imparts a bluish tinge; whilst a violet blue shade follows the substitution of ammonia for sodium carbonate as the neutralising agent.

According to Hecht, good tones are obtained with the following fritt:—Potassium carbonate 44·3 parts, crystallised borax 95, boric acid 12·30, chalk 25, barium carbonate (witherite) 48·98, quartz sand 144 parts, the whole being well fritted and mixed with 25 per cent. of its own weight of kaolin.

Underglaze Colours.—Brongniart described a method of obtaining underglaze pink by dipping the biscuit ware into a mixture of suspended glaze and gold chloride solution; but success would seem to have been precarious, and the same shade of Isabella pink is now obtained with a preparation consisting of pegmatite 50, alumina 50, gold chloride 1 part. By increasing the proportion of gold a violet shade is obtained. The ware has to be fired at the temperature of No. 9 cone. Seger suspends 90 grms. of finely divided kaolin and mixes the same with a solution of 10 grms. of gold in aqua regia (the excess of acid having been expelled by evaporation), the whole being made alkaline with carbonate of soda. The liquid is then heated for half an hour with 20 grms. of grape sugar, the water lost by evaporation being replaced. The resulting purple mass is washed, dried, and heated to the fusing point of silver. A second washing should be given after crushing. For a pink tone the same author advises kaolin 98 parts, gold (dissolved as chloride) 2 parts.

Another method of applying gold colours underglaze is to dissolve the metal, so as to obtain a solution of minimum acidity, and then mix the solution with a viscous medium such as glycerine, taking, for instance, glycerine 90 c.c., gold solution 10 c.c. The tone may be varied by using gold solutions of different strengths, from 0·250 to 3 grms. per litre.

Gold Underglaze.—A final method of applying gold is by a combination of gilding and underglaze decoration. The ware is first coated with a glaze designed to support the gold. Next, all the parts which are to receive the gold are coated with mucilage (gum tragacanth, quince-seed jelly, &c.), the gold leaf being laid on with a camel-hair brush. A top coating of glaze being applied, the ware is fired. Very rich effects are obtained, differing according as the glaze is plain or coloured, and by sprinkling sand on the ware previous to laying on the gold leaf, a granular effect is produced.



Legal.

Insured Person's False Pretences.—(From our Potteries Correspondent.)—At the Stoke Stipendiary Court on Sept. 5, Sarah Ann Slater, married, a pottery thimble maker, of 6, Challinor-square, Fenton, was summoned for obtaining money by false pretences from the Tunstall Benevolent Burial Approved Society. Mr. E. W. Hollinshead, prosecuting, said the defendant was a member of the approved society, under the National Insurance Act, of the Tunstall Benevolent Burial Society. Since the defendant joined in July, 1912, she had on four occasions declared on the funds for sickness benefit. During a part of all four periods when she was receiving sickness benefit, she followed her occupation at Ogden & Co.'s works, Hanley, and received wages. On each of those occasions, before making sickness payments, the agent of the society received from the defendant a declaration note, stating that she was not able to work, and a medical certificate of incapacity for work. Evidence was only taken in respect of one of the four occasions. Mr. Hollinshead stated that altogether the defendant received 34s. 6d., to which she was not entitled. The defendant, who said she was sorry for what she had done, was fined £3 and costs.

Compensation for Injured Hand.—(From our Potteries Correspondent.)—An application for an arbitration under the Workmen's Compensation Act was made at the Hanley County Court on Sept. 17 to his Honour Judge Ruegg, K.C., by Emily Hillman, potter's batter-out, of Etruria-road, Hanley, the respondents being the Newhall Pottery Co., Ltd. The case for the applicant was that whilst following her employment as a batter-out, she injured the little finger of her right hand. Blood poisoning ensued, and the finger was amputated. She had earned 10s. a week as a batter-out, and compensation was paid her at half rate, namely 5s. weekly. Later, the payment was reduced and eventually stopped, because the respondents stated she could do the light work of mould running which was offered her. Applicant, however, said she could not do it, owing to her hand. She asked for the payment of compensation to be resumed. Respondents submitted that the applicant was capable of doing light work. She had refused mould running, not because she was unable to do it, but because she said it was a girl's work, and that she would feel "sneaped" if she did it. She could earn 7s. 9d. per week at mould running. Mr. Reginald Alcock, surgeon, said she was quite capable of doing the work. His Honour held that the woman could do mould running, and he awarded the applicant compensation at 1s. 1½d. per week—half the difference between 7s. 9d. and 10s., her former wages.

Glassmakers Sued for Neglect of Work.—At Smethwick Police Court on Sept. 11, H. Simmonds, J. Ingram, and H. Hemmings were summoned by Chance Bros. & Co., Ltd., of Spon-lane Glass Works, who claimed £4 11s. 5d. damages from each for neglect of work. Mr. J. S. Sharpe, for the firm, said the defendants were pipe warmers. On Sept. 1, after working for half an hour they refused to do any more. Their grievance was that a certain pipe warmer had been promoted to the position of "gatherer," which was regarded as work of a somewhat higher grade. The foreman pointed out that their agreement was to give or take fourteen days' notice. They refused to do this. The consequence of their leaving work was that fifty of the 200 or 300 employed in the department were immediately thrown out of work, resulting in serious loss to the department, which was put at £32. The defendants were now back at work, and the firm was disposed to

ake a lenient view of the matter. The company had nder consideration the question as to whether they hould continue that particular department or not. In une last Captain W. L. Foster, a managing director of he firm, was in communication with the men's trade nion leader, Mr. Beard, who expressed the wish that he department should be continued because so many nen were employed there. Captain Foster said his com-any did not wish to unduly press the case against the nen, but they felt it was imperative they should take ome steps to stop similar actions on the part of other vorkers in the department. A repetition of such actions nust inevitably lead to the closing down of that particular lepartment. If an order was made against the defendants he firm would not necessarily enforce it—it was their ustom not to do so. Major Thompson, the presiding nagistrate, said an order for the amount claimed, with osts, would be made against the defendants, and it would e left to the generosity of Chance, Bros. & Co., Ltd., as o how it was enforced. Defendants expressed regret at heir action, which they promised would not be repeated.

Losses on Oven Firing. — (From our Potteries Correspondent.)—An important action concerning losses on he firing of ovens was heard by Judge Ruegg, K.C., t the Hanley County Court on September 17 and 18. The laintiff was Arthur Cookson, Church-street, Hanley, otters' fireman, and the defendants, Messrs. Bishop & tonier, Ltd., china and earthenware manufacturers, tafford-street, Hanley. Plaintiff claimed £9, one month's ages, in lieu of notice, and the defendants counterclaimed 13 4s. 9d. damages, alleged to have been sustained through he plaintiff's negligence. Mr. S. A. H. Burne was for the laintiff, and Mr. J. E. Moxon for the defendant com-any. Plaintiff's case was that he had been engaged by he defendants as fireman for some years. Early in last ear the glost ovens of which he had charge produced quantity of blistered ware. Believing that it was ue more to the condition of the ovens than to the firing, e himself gave notice to leave. Shortly before the xpiry of the notice, it was arranged that he should fire hree other ovens as a test, but he declined a suggestion hat he should continue as fireman conditionally on his aiving the right of notice and paying £3 damages. In une last, as the result of further oven trouble—a quantity f ware coming out black—he was summarily dismissed. Ie contended that the cause of the final trouble was that he oven was out of order and needed repair. For the efence, Mr. Dunbar Bishop, director of the defendant rm, said the plaintiff had worked for them for some ears, and until early in last year without cause of com-laint. Since then, however, they had suffered a con-derable loss through blistered ware from the glost ovens. etween Feb., 1912, and May of this year they had ustained a loss of £100 beyond the loss customarily ex-erienced with ovens. Witness called Cookson's attention o it, but he said he could not account for it. Witness, owever, came to the conclusion it was due to irregularity f firing. Plaintiff gave notice, but towards the time for s expiry came to see witness and offered to withdraw it. Witness agreed that he should stay another week and fire ree other glost ovens, the terms of re-engagement to e then considered. The three ovens came out better, ut not quite satisfactorily. He then told Cookson he ould remain, conditionally on his waiving ordinary notice nd consenting to receive or give instant notice, and aying £3 towards the damage sustained. Plaintiff eclined to pay any damages, but consented to waive ne customary notice, and on these terms he continued ork. From April to June the ovens were satisfactory, ut on June 5 ware to the value of £5 6s. 10d. came out black. Plaintiff thereupon blamed the "sitter-up." On June 27 there was a further loss, and as Cookson refused to pay £3 as damages, witness told him he must consider the contract terminated. Mr. John Gater, consulting potter, called for the defence, said he had acted for the firm for the past eight years, and had always found their ovens in a satisfactory condition. He was called in to see the damaged ware. The blistering, in his opinion, was due to the oven having been fired too rapidly. The black ware was likewise the result of bad firing; it was due to the fireman letting the fire go too low and then putting on too much fuel, so causing smoke. His Honour found that the plaintiff did agree to the revised terms, therefore the claim failed. With reference to the counter-claim, he remarked that from cases which had come before him it was difficult to determine the cause of bad ware. He recalled a case where the loss was attributed to bad firing, and yet it was admitted that the fireman had shown no negligence. Everybody had their theory and they all differed. He was not at all satisfied that the bad ware was caused by the plaintiff's imperfect firing. There would accordingly be judgment for the defendants on the claim, and for the plaintiff on the counter-claim.

Liability for Lead Poisoning Compensation. (From Our Potteries Correspondent.)—An unusual and difficult point as to liability for compensation for lead poisoning was submitted to Judge Ruegg, K.C., at the Longton County Court, on Sept. 9. Ellen Dean, widow, Edensor-road, Longton, claimed an arbitration under the Workmen's Compensation Act in respect of the death of her husband, Thomas Dean, on May 15. The Rubian Art Pottery, Ltd., manufacturers, of Fenton, were the respondents, and Wileman & Co., manufacturers, of Fenton, were brought in as a third party to the arbitration. Mr. A. B. Whitfield represented the applicant, Mr. F. Boyd Merriman appeared for the respondents, and Mr. S. A. H. Burne watched the interests of Messrs. Wileman. The facts of the case, according to Mr. Whitfield, were that the deceased man, Dean, for the greater part of his life—he was 51 years of age—had worked as a potter's dipper, a lead process. Seven years ago he commenced work for Messrs. Wileman as a glost placer—also a lead process—but latterly was given employment in non-lead processes. There was no evidence, said counsel, that the deceased had been working in lead at Messrs. Wileman's during the 12 months preceding his death. He had, however, worked for two short periods as a ware cleaner—a lead process—for the respondents, the Rubian Art Pottery Co. These periods consisted of four days from March 11 last, and four days from April 14 last, the deceased having taken the place of a workman who was ill. On May 6 the deceased had a severe attack of pneumonia, and died on the 15th. Although his death was due to pneumonia, the condition of his organs, owing to lead poisoning, was such that he had no chance of resisting the pneumonia. Therefore, counsel stated, his death was indirectly caused by lead poisoning. Mr. Whitfield said he was not required to prove that the man contracted lead poisoning during the short time he worked for the Rubian Art Pottery Co.; all he had to do was to show that death was due to lead poisoning, and that the man had worked in a lead process for the respondents during the twelve months preceding his death. He could not proceed against Messrs. Wileman, because he had no evidence that Dean worked in lead there for 12 months preceding his death. The respondents could escape liability (1) by proving that the disease was contracted by the workman whilst in the employ of someone else, in which case they might join such employer as a party to the arbitration; or (2) where the

disease was gradually contracted, any other persons who had employed the workman during the 12 months previous to his death could be made liable as well. Dr. Lefevre, questioned by Mr. Merriman as to whether the two terms of four days' work made any appreciable difference to the condition of the man's organs, said it was not possible to separate any part of his employment. He had to take the employment as a whole, and any fortnight would take its proportionate share. Dr. John Russell, called by the respondents, said he was of opinion the man's condition was not aggravated by the eight days' work for the respondents. Mr. L. L. Grimwade, managing director of Messrs. Grimwade, Ltd., who own the Rubian Art Pottery, said the firm used the moist process of ware cleaning, which was one of the least harmful of lead processes. Mr. Merriman said the respondents could escape liability by proving that the disease was contracted whilst Dean was in the employment of Messrs. Wileman. He worked for that firm five years as a glost placer, and the evidence that the disease was contracted there was overwhelming. Mr. Burne contended that the respondents could only pass on the liability to Messrs. Wileman by proving that Dean was employed in a lead process there during the twelve months preceding his death. The whole spirit of the Act was to limit liability to twelve months before death. Mr. Merriman replied that whilst the second sub-section, quoted by Mr. Whitfield, imposed the 12 months' limit, there was nothing to prevent respondents passing on their liability, under the first sub-section, by showing that the disease was contracted whilst the workman was in the employment of someone else. In that sub-section there was no time limit. His Honour reserved judgment, observing it was a difficult point.

Review.

A Treatise on Quantitative Inorganic Analysis. With special reference to the Analysis of Clays, Silicates and Related Minerals. Being Vol. I. of a Treatise on the Ceramic Industries. By J. W. Mellor, D.Sc. 778 pp., with 2 plates and 206 other illustrations. London : Charles Griffin & Co., Ltd. 30s. net.

This large and imposing volume attempts to do for the clay and silicate industries what C. R. Fresenius did for the inorganic compounds generally, namely, to set out in the fullest possible manner the best processes to be used in the analysis of any given substance. The methods used are those employed at the County Pottery Laboratory, Stoke-on-Trent, and this lends an additional interest to the book.

There is an interesting, if diffuse, introduction in which the author ingeniously contrives to suggest himself as the umpire in cases of disputed analyses, by recommending that instead of testing a third sample, the opposing chemists should analyse a "standardised sample" which can be obtained from the author for half a guinea. Why the sample thus obtained should bear a more correct analysis than the one in dispute is not stated. Strangely in contrast to this are the author's recommendations that an analytical process should be "humoured," though these agree fully with the reiterated assertion that analysis is an "art," many of the processes of which "are purely empirical or rule of thumb."

It is somewhat difficult rightly to appraise the value of this work, because it is of such a nature that it endeavours to appeal simultaneously to the neophite and to the well-trained chemist. Yet the requirements of these two classes are quite different, and the book is unwieldy and diffuse in consuquence. Thus, the first 150 pages are occupied with matter which the student should learn by actual contact with the appliances in a good laboratory. Little or nothing in this section is new and practically the whole of it can be learned from much cheaper books, even if the student has not become familiar with the more important portions during his school days.

The really useful part of the book commences with Chapter X., and from this stage on the book is a more or less systematic summary of all the hints and suggestions published in the leading scientific journals during the past fifty years or more, with a few, yet none the less notable, exceptions. A rough computation shows that nearly eight thousand references are made—a piece of "scissors and paste" work which has probably not been excelled by any writer on analysis of inorganic substances belonging to a single group.

The author's method appears to consist in quoting all the previous writers and then to state a method of procedure which appeals to him as being the most suitable, quite apart from the conclusions reached by other writers. This is admirable for the trained chemist, the investigator, and even for post-graduate students, but its value for beginners or intermediate students is open to question. Even the qualified chemist would welcome some indication as to the reasons which led the author to depart so widely from the procedure laid down by Lunge and other writers of equal prominence, especially as the author lays great stress on the need for simplicity in procedure.

As a work of reference this volume is likely to prove valuable, though the author too often allows his zeal for criticism to outrun his knowledge. To mention only one instance, he states (p. 222) that the method generally employed for estimating the alkalies by weighing as mixed sulphates is unsatisfactory (indeed, he includes it under the head of "meretricious"!). The method he assumes as being used is certainly open to criticism, but it is doubtful if any chemist of good reputation in the analysis of clays would do as he suggests, and assume the proportions of potash to soda. Surely so able an author must be aware that the usual procedure consists in deducting the sulphur trioxide from the weight of mixed sulphates and thus obtaining the alkalies as mixed oxides, there being then no necessity to make a separation unless the proportion of the alkalies is sufficiently large to make it desirable. We can only conclude that his statement that "there is no method known for determining alkalies without separating them into potash and soda" is one of the small slips which obscure the volume in several instances. A less important one occurs on p. 176, where Mr. Green is stated to have heated silica to 450 deg., but in the table summarising his results a temperature of 800 is given.

As a "laboratory book" the work before us is far too bulky to be useful or convenient ; it is essentially a volume for the bookshelf—to turn to in the same way that one would refer to "Fresenius," "Sutton" or "Lunge." It is curious that although he admits the existence of the last-named's great work on methods of chemical analysis, yet Dr. Mellor appears to have studied it very superficially. It is even more curious that he should not know of the existence of an English edition (cf. p. 733). The list of names in the index is very lengthy, yet we note with some surprise that several well-known ceramic chemists were omitted.

One other matter also caused us great surprise : Dr. Mellor has, surely by an oversight, described his book in the sub-title, which alone gives it a specific designation, as Vol. I. of "A Treatise on the Ceramic Industries." This is certainly regrettable, as it is likely to lead to confusion with Bourry's standard work, the English translation of which, published by the proprietors of THE POTTERY GAZETTE, bears the same title.

MODERN PATTERNS FOR GLAZED TILES.

THE designs illustrated are taken from a series of decorators' documents now appearing serially in "The Oil & Colour Trades Journal." No. 1.—Ground bluish white, background of undulated streaks light yellow, fillets and small bunches yellow ochre; background of small rose bold blue Delft, rose itself golden yellow. The large rose should be moss green. No. 2.—Ground rose, flower red lake, stems and foliage green, background bold rose-hued, structure raw sienna, and fir cones brown. No. 3.—Ground cream colour, background (parts cross-hatched) same shade a little darker; the parts which are black on the design must be brownish red, the whole outlined yellow ochre. No. 4.—Ground very light green, flowers moss green rather dark, stems burnt sienna, and small square golden yellow.



The China Clay Export of Austria-Hungary during the first half of the current year amounted to 91,387·2 m. tons, showing a marked increase.

BRITISH TRADE WITH COLOMBIA AND VENEZUELA.

IN the Blue Book concerning British Trade in Central America, abstracted in our last issue, are included similar reports by the same Special Commissioner dealing with Colombia and Venezuela. These contain the following paragraphs :—

COLOMBIA.

CHINAWARE AND EARTHENWARE.—The imports at Barranquilla have been as follows :—1909 (weight, 1,000 kilos.) 183·6 (value, £1,000), 6·3; 1910, 232·4, 6·8; 1911, 211·5, 6·5. Over two-thirds of this trade is German, about 13 per cent. British, and most of the remainder French; the share of the United States tends to increase. The demand is chiefly for cheap ware. Importers state that British earthenware is too heavy; the duties being payable on the gross weight, the amount to be paid on a given number of pieces of the same size is higher than in the case of lighter ware.

GLASS.—The imports of window glass are trifling; glassware is chiefly German and French; bottles are mostly German, American, and French.

VENEZUELA.

CHINAWARE AND EARTHENWARE. — Pottery of the coarsest kind only is made in the country. There is a considerable industry in the manufacture of mosaic tiles. Plain earthenware is entered in the third class of the Tariff and is subject to a reduction of 20 per cent. on the amount of the primary duty; that of more than one colour with designs is in the same class, but is subject to an increase of 20 per cent. on the primary duty. Chinaware is in the fourth class. The imports in the third class amounted to £7,360 in 1910-11 and to £8,217 in 1911-12. Germany had more than half of the trade, the remainder being shared by the United Kingdom and Holland. Germany had also the principal share in the trade in chinaware, the value of which is less than half that of earthenware. The commonest sort of imported earthenware is used in the interior, and it is there that the German ware finds a market. The earthenware used in Caracas is largely British. Importers complain of the long delay that takes place in the filling of orders sent to England. There should be a greater demand for sanitary ware than there has hitherto been. At present the market is partly supplied from the United States and partly from the United Kingdom; United States ware is stated to be lower priced than British.

GLASS.—A local company with a capital of Bs. 2,500,000 was started in Caracas in February, 1912. It has a monopoly for glass manufacture for 20 years, as well as the right to import machinery and material free of Customs duty. The duty on imported bottles was increased to assist the industry. The factory, which is equipped with modern machinery of German manufacture, employs about 250 hands, men and women. A good deal of the work is paid by the piece. The electrical power is purchased from another company. It is stated that the factory turns out about 9,000 bottles, 2,000 tumblers, and 4,000 lamp tubes daily, and also makes some dishes. Sand of good quality is found near the factory, as well as marble, which is ground up in roller crushing mills. Salt is also obtained locally. All other necessary materials are imported from Germany. It is proposed to erect a continuous oven capable of turning out 25,000 bottles daily. Pint bottles, for which there is most demand, are sold at Bs. 18.50 per hundred, without wrapper, as against Bs. 21.00, the price of those imported.

The latter have a wrapper to protect them from breakage and are put up in bales. It is rumoured that an effort may be made to sell this concern in Europe. Bottles are dutiable in the second class of the Tariff. To this should be added a surtax of 12½ per cent. on the primary duty on all kinds of bottles, except those for mineral waters. Window glass is in the third, and glassware in the fourth class. The imports of window glass are not important. In 1911-12 the trade in bottles amounted to £24,465, Germany supplying 90 per cent. The British share of less than 5 per cent. was practically confined to mineral water bottles. The imports of glassware amounted in value to £14,857, about one-half being from Germany, 29 per cent. from the United States, and the remainder mostly from France and Holland. The most ordinary kinds are American, the better qualities German or Austrian, and the finest quality only is French. German packing in this line is described as being better than American, which, being too heavy, involves the payment of a greater amount of duty. Mirrors are silvered to some extent in the country.

NON-POISONOUS LEAD FLUXES.

(SPECIALLY TRANSLATED.)

THE following lead fluxes claimed to pass the German Government test (boiling in acetic acid for half-an-hour), and are therefore classed as non-poisonous, are given in the "Sprechsaal Kalender":—

Melting point, Seger cone 0·22—0·20:—(1) Sodium oxide 0·10, potassium oxide 0·15, lead oxide 0·75, alumina 0·15, silica 2·50, boric oxide 0·40. (2) Sodium oxide 0·30, potassium oxide 0·20, lead oxide 0·50, alumina 0·15, silica 2·55, boric oxide 0·45. (3) Sodium oxide 0·20, potassium oxide 0·30, lead oxide 0·50, alumina 0·15, silica 2·55, borie oxide 0·45.

Melting point, Seger cone 0·20—0·18:—(1) Sodium oxide 0·15, potassium oxide 0·15, lead oxide 0·60, barium oxide 0·10, alumina 0·15, silica 2·45, boric oxide 0·45. (2) Sodium oxide 0·15, potassium oxide 0·15, lead oxide 0·60, barium oxide 0·10, alumina 0·15, silica 2·45, boric oxide 0·50. (3) Sodium oxide 0·10, potassium oxide 0·15, lead oxide 0·65, barium oxide 0·10, alumina 0·15, silica 2·50, boric oxide 0·40.

Melting point, Seger cone 0·15:—(1) Lead oxide 0·8, barium oxide 0·2, alumina 0·15, silica 2·50, boric oxide 0·40. (2) Lead oxide 0·9, barium oxide 0·1, alumina 0·15, silica 2·50, boric oxide 0·40.

Melting point, Seger cone 0·5:—(1) Lead oxide 0·85, barium oxide 0·15, alumina 0·15, silica 3·05, boric oxide 0·40. (2) Lead oxide 0·90, barium oxide 0·10, alumina 0·15, silica 3·05, borie oxide 0·40.

COEFFICIENT OF EXPANSION OF GLASSES.

(SPECIALLY TRANSLATED.)

IN comparing the results of direct measurements of the coefficient of expansion of glasses with the values obtained by calculating with the formula laid down by Winkelmann and Schott, and supplemented by Mayer and Havas, J. Wolf found that the differences between the two sets of values came within the limits of deviation given by the first-named authorities. It was also found that, in the case of thoroughly cooled lead glasses, Winkelmann and Schott's constant of 3 for PbO is correct, whereas for uncooled lead glasses (Nos. 2, 3, 3a, and 10 in the subjoined Tables) the Mayer and Havas value for this oxide, viz., 4·2, should be taken. Finally, it was observed that as careful, slow cooling of the lead glasses progresses, the co-efficient of expansion diminishes.

Coefficient of expansion, percentage composition, and method of cooling (measurements taken between 15° and 100° C.):—

1. CRYSTAL GLASS.

No.	K_2O	Na_2O	CaO	PbO	SiO_2	B_2O_3	Coefficient of expansion $a \cdot 10^{-7}$ Found.	Cal.	Diff. %	Remarks.
1	0·25	0·35	0·30	—	4·00	—	245·9	247·9	−0·84	Well cooled.
2*	0·50	—	—	0·50	3·00	—	290·0	298·8	−3·00	Cooled 1 hour.
3*	0·36	—	0·14	0·50	3·00	—	286·2	281·8	+1·60	Uncooled.
3a	0·36	—	0·14	0·50	3·00	—	254·0	242·0	+4·70	Cooled 5 hours.
4	0·40	0·10	—	0·50	2·90	0 20	278·8	288·5	−3·36	Cooled.
5	0·60	—	0·25	0·15	4·00	0·07	241·7	240·9	+0·33	Very thoroughly cooled.

2. COLOURED GLASS.

No.	K_2O	Na_2O	BaO	PbO	SiO_2	B_2O_3	TiO_2	Coefficient of expansion $a \cdot 10^{-7}$ Found.	Cal.	Diff. %	Remarks.
6	0·4	0·1	0·2	0·3	3·2	0·2	0·1	241·2	242·5	−0·54	Very thoroughly cooled.

3.—COLOURED GLASSES FOR FLASHING.

No.	K_2O	PbO	MnO	Cu_2O	SiO_2	Sb_2O_5	Coefficient of expansion $a \cdot 10^{-7}$ Found	Cal.	Diff. %	Remarks.
7	0·25	0·75	—	—	3·00	0·026	232·6	229·6	+1·3	Well cooled.
8	0·40	0·60	—	—	3·20	0·026	249·1	243·1	+2·4	Cooled.
9	0·40	0·60	—	—	3·30	0·026	245·8	238·0	+2·9	Cooled.
10*	0·48	0·52	—	—	3·10	—	291·9	293·6	−0·58	Uncooled.
11	0·48	0·52	—	—	3·50	—	238·9	242·3	−1·45	Very thoroughly cooled.
12	0·36	0·50	0·14	—	3·00	—	286·2	278·2	+2·8	Cooled.
13	0·287	0·667	—	0·066	2·88	—	227·7	229·2	−0·65	Copper ruby. Very thoroughly cooled.
14	4·41	0·508	—	0·082	3·46	—	220·0	231·6	−5·0	Do. do. do.

4.—CRYOLITE GLASS.

No.	K_2O	PbO	Na_3AlF_6	SiO_2	B_2O_3	Coefficient of expansion $a \cdot 10^{-7}$ Found.	Cal.	Diffce. %	Remarks
15	0·72	0·27	0·54	7·27	0·18	279·7	283·1	−1·2	Very thoroughly cooled.

5.—SPAR GLASSES.

No.	K_2O	Na_2O	PbO	CaF_2	SiO_2	Coefficient of expansion. $a \cdot 10^{-7}$ Found.	Cal.	Diffce. %	Remarks.
16	0·28	0·30	—	0·42	4·30	213·3	213·9	−0·28	Very thoroughly cooled.
17	0·10	0·30	0·3	0·20	3·20	237·2	233·6	+1·52	

6.—ENAMEL GLASS FOR FLASHING.

No.	K_2O	Na_2O	CaO	PbO	SiO_2	B_2O_3	P_2O_5	SnO_2	As_2O_3	Coefficient of expansion $a \cdot 10^{-7}$ Found.	Cal.	Diffce. %	Remarks.
18	0·17	0·03	0·12	0·68	2·4	0·06	0·04	0·05	0·125	214·4	230·2	−6·9	Well cooled.

("Sprechsaal Kalender.")

Earthenware and China to the value of £7,785 was imported into Madagascar during the year 1912, as against £4,442 worth imported in 1911 and £6,170 worth in 1910.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR AUGUST, 1913.

		Quantities. Month ended August.		Eight Months ended August.		Value. Month ended August.		Eight Months ended August.	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	4,349	2,149	35,691	23,295	£5,530	£4,546	£44,352	£40,481
„ France	„	6,026	3,568	51,346	57,953	10,468	7,257	58,256	75,237
„ United States of America	„	24,847	21,596	174,846	177,113	39,444	41,609	255,269	278,239
„ Brazil	„	29,707	37,459	247,807	275,527	20,297	24,806	140,136	203,894
„ Argentine Republic	„	44,504	53,256	247,344	390,615	22,107	29,319	173,733	229,650
„ British South Africa	„	10,458	14,888	73,924	104,875	11,884	11,727	76,381	93,999
„ British East Indies	„	16,855	35,498	227,102	271,767	12,659	23,464	137,686	180,002
„ Australia	„	28,278	21,118	166,601	188,193	33,531	30,116	199,660	219,872
„ New Zealand	„	11,172	7,364	54,907	54,980	11,093	11,667	70,765	81,404
„ Canada	„	89,043	45,719	361,240	409,797	58,230	41,796	287,710	345,731
„ Other Countries	„	109,460	86,153	723,241	799,129	75,076	65,321	489,583	546,401
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	„	1,520	2,326	10,126	13,206	15,523	23,580	93,553	130,081
Floor Tiles for Tesselated Pavement	„	6,761	8,268	49,958	54,763	6,259	7,004	49,203	48,368
All other Tiles (except Roofing and Street Paving)	„	12,845	12,566	93,600	118,300	12,354	13,604	89,182	123,265
Sanitary Ware	„	36,296	24,641	229,083	258,812	51,841	40,804	322,430	383,704
Electrical Ware, Door Fittings, and Chemical Ware	„	2,365	8,142	25,294	38,702	4,780	6,296	26,874	37,355
Other Earthenware (including Semi-Porcelain and Majolica)	„	130,999	118,857	888,004	963,087	176,809	169,497	1,163,174	1,306,424
Jet, Rock'm, and Glazed Terra-cotta	„	1,440	97	2,847	4,828	1,003	225	3,407	4,436
Red, Stone, Brown and Yellow Ware	„	182,973	153,871	1,065,137	1,301,546	31,750	30,618	185,708	261,277
GLASS.									
To British South Africa	value £	—	—	—	—	9,682	11,085	64,809	72,646
„ Other Countries	„	—	—	—	—	145,975	133,814	1,059,668	1,144,516
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	19,006	19,001	141,670	168,292	34,254	33,231	243,331	277,987
Flint Glass	„	6,714	6,478	55,480	54,496	22,990	25,671	180,555	201,827
Glass Bottles	gross	85,613	69,465	640,546	630,757	55,163	43,994	393,986	391,865
Glass Manufactures, unenumerated	cwts.	57,875	51,989	419,858	431,095	43,250	42,003	306,605	345,483

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR AUGUST, 1913.

Porcelain, Chinaware, and Parian	cwts.	7,972	3,373	30,171	28,840	£37,671	£15,111	£148,519	£144,822
Floor Tiles for Tesselated Pavement	„	25	59	285	1,008	56	82	357	811
All other Tiles (except Roofing and Street Paving)	„	4,369	3,187	20,403	24,176	2,539	2,478	12,411	16,192
Sanitary Ware	„	16	67	287	189	25	131	595	419
Electrical Ware, Door Fittings and Chemical Ware	„	2,342	2,873	18,017	19,948	3,390	5,030	28,422	33,101
Other Earthenware (including Semi-Porcelain and Majolica)	„	30,191	26,467	209,678	219,821	63,865	53,561	420,798	446,924
Jet, Rock'm, and Glazed Terra-cotta	„	126	190	173	806	404	324	609	1,651
Red, Stone, Brown and Yellow Ware	„	12,575	38,984	162,699	223,917	2,719	6,360	37,521	48,598
Window and German Sheet Glass	„	124,138	90,010	849,227	801,278	69,133	52,444	484,674	456,444
Plate Glass	„	34,428	31,408	221,825	325,487	40,512	40,727	274,874	394,874
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	„	82,833	83,231	562,958	626,578	125,703	117,991	843,207	867,484
Glass Bottles	gross	151,292	138,115	1,135,081	1,276,883	64,289	57,383	486,799	533,257
Glass Manufactures, unenumerated	cwts.	2,581	503	14,283	2,166	1,946	428	11,919	3,588

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR AUGUST, 1913.

Porcelain, Chinaware, and Parian	cwts.	5,305	1,384	10,644	8,891	£26,198	£7,555	£55,590	£47,575
Of all Other Sorts	„	512	826	5,637	8,713	1,369	1,569	8,061	17,242
Window and German Sheet Glass	„	2,127	695	7,385	5,290	1,015	374	4,309	2,809
Plate Glass	„	911	653	3,671	7,108	1,636	894	5,534	10,224
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	„	973	823	8,328	9,603	2,973	2,695	22,160	29,979
Glass Bottles	gross	3,685	6,738	25,022	41,826	1,930	4,222	13,524	24,058
Glass Manufactures, unenumerated	cwts.	228	167	1,244	1,141	184	159	1,378	886

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from July 27, 1913, to August 27. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to August 27. Packages.	Corresponding Period, 1912. Packages.
Boston	787	714	5,189	4,502
New York	695	830	6,047	6,008
Baltimore	515	792	4,233	5,286
Philadelphia.....	170	276	1,601	2,175
New Orleans.....	147	70	1,008	578
Newport News ...	6	3	41	54
San Francisco ...	96	218	847	981
Portland, Maine .	0	22	1,299	653
Galveston	17	35	211	374
Portland, Oregon	0	20	203	172
Inland Points ...	91	88	562	465
Total	2,524	3,068	21,241	21,248

Trade Notes.

The Editors are always glad to receive items of trade intelligence such as removals, new premises, personal items, &c.; also marked local newspapers.

Mr. Harry Porter, glass, china, and earthenware dealer, Timbrell-street, Trowbridge (Wilts.), died a few days ago in the Royal United Hospital, Bath. Deceased was 44 years of age.

New Glass Works.—It is announced that a local concern has acquired land at Horseley Heath, Tipton, for the purpose of erecting glass works. This will introduce a new industry into the district.

Mr. Wm. Thornber announces that, owing to his departure from the district, he is giving up Ginns Pottery at Whitehaven, which he has carried on. The stock has in consequence been disposed of by auction.

Mr. Geo. Proctor, of Thornton-in-Craven, a director of Whittaker & Co., Ltd., tile manufacturers, Brow Works, Blackburn, has been included amongst a number of new magistrates appointed for the Borough of Burnley.

The business of china merchant and general dealer, carried on by Mr. Thomas Connelly at No. 61, Glaisnock-street, Cumnock, Ayrshire (who now retires), has been made over to his son Mr. Thomas Connelly, jun., who continues the same.

The death is announced at the age of 75 years of Mr. Johnson Braddon, the oldest member of the staff of Webb & Corbett, Ltd., glass manufacturers, Ludgate-street, Tutbury. Deceased had been with the firm for 65 years, and was a prominent Oddfellow.

Damaged Crockery.—Mr. Hibbs, earthenware dealer, Callington (Devon), sustained a serious loss on Sept. 16. He was at Highampton with a cart laden with crockery and glassware when, in rounding a corner, the vehicle overturned. Stock to the value of £20 was smashed.

The marriage took place at the Church of Our Lady, Portico, on Sept. 16, of Mr. Richard Seddon, jun., member of the firm of R. Seddon & Sons, Phœnix Glass Works, St. Helens, and Miss M. Roscoe, only daughter of Mr. G. F. Roscoe, Birkenhead. They received many costly presents.

The death took place on Aug. 28 of Mr. Amos Ware, Burgess Hill (Sussex), managing director of the Keymer Tile Co., Ltd., and of the firm of Benjamin Ware & Sons. the Potteries, Ridgewood. Deceased, who was between 40 and 50 years of age, had suffered from an internal complaint.

British Clay Exports during the month of August were as follows :—China clay, 39,176 tons (£46,433); fire clay, 3,320 tons (£3,491); other sorts, 8,137 tons (£8,163). Exports for August, 1912, were :—China clay, 58,022 tons (£62,530); fire clay, 3,973 tons (£3,431); other sorts, 6,981 tons (£5,064).

The Royal Art Pottery Co., of Waterloo Works, Longton, inform us that Mr. Bevington is now at the London showrooms, 10, Holborn-circus, and that the showrooms are always open. The firm have found that, the showrooms having been shut up for some little time, many buyers have called and found them closed.

The death occurred on Aug. 23 of Mr. John Rigby, who had spent all his life at the works of Cannington, Shaw & Co., glass bottle manufacturers, Sherdley Glass Works, St. Helens, and became one of the firm's managers. He was 53 years of age, and for three years was President of the Lancashire Glass Bottle Makers' Trade Protection Association.

Presentation.—On the occasion of her marriage on Sept. 16, to Mr. Albert Potts, Miss Ida Mary Parker, elder daughter of Mr. Tom Parker, J.P., of Woodville, near Burton-on-Trent, has been presented with a pedestal vase and umbrella stand in art pottery by the employees of Nadin, Parker & Co., Reliance Pottery, Woodville, and an oak dining-room clock by the employees of Haywood & Co., Moira, Swadlincote.

Pilkington's Tile and Pottery Co., Ltd., of Clifton Junction, Manchester, have received an official intimation that the King has been graciously pleased to authorise them to describe their well-known artistic productions as the "Royal Lancastrian Pottery." This is a pleasant sequel to the recent Royal visit to Lancashire, when the beautiful productions of the firm were brought to Their Majesties' notice on several occasions.

Lead Poisoning from Water Supply.—Dr. J. T. Neech, the Medical Officer of Health for Halifax, in his annual report, mentions that in connection with certain domestic local water supplies there were a number of lead-poisoning cases during the year. Samples were taken from the water supplied to twenty houses, and in each case it was found to be dangerously contaminated with lead. The lead service pipes had been replaced with iron pipes, and the inhabitants of the houses now stated that their health had very much improved.

The business of the late Mr. Samuel Millroy, founded in 1828 at 131, Windsor-street, Liverpool, by James Millroy, grandfather of the present Mr. Samuel Millroy, is now closed down. Mr. Samuel Millroy intends making an interesting business tour through British South Africa, New Zealand, Eastern and Western Coasts of Australia, Fiji Isles, and ultimately finishing up in Japan. We wish Mr. Millroy all the success that his enterprise deserves. He has been interested in the export and indent business with the Colonies for a considerable number of years, and several prominent manufacturers are interested in his tour.

The Plate Glass Problem.—An architectural correspondent of the "Times" referred recently to the problem of th plate-glass window, saying, "The vast size of a modern 'store' demands windows of a proportionate expanse, and the task of the architect is at once to provide such windows and to ensure that they shall not be too blatantly obtrusive. A really successful effect can be achieved only by the nicest calculations. An error in proportion or construction which might escape notice in a shop-front of moderate dimensions becomes uncompromisingly obvious when magnified to the scale entailed by a building such as Harrod's."

Fires.—On Sept. 3 a fire occurred at the Parkfield Tile Works, Great Lever, near Bolton, owned by Mr. Jas. Fletcher. The outbreak originated in one of the huge series of kilns through the roofing igniting. The damage done, placed at £150, is covered by insurance.——A fire occurred on Aug. 31 at the works of E. J. & J. Pearson,

Ltd., fire-brick and gas retort manufacturers, Delph. Fortunately the outbreak was confined almost exclusively to its original scene—the large mill house. This building, together with the valuable machinery it contained, was destroyed. The damage, which is estimated at about £2,000, is covered by insurance.

Plate and Sheet Glassworkers' Strike Settled.—As the result of conferences arranged by the London Labour Conciliation and Arbitration Board between the London Employers Plate Glass Trades' Association and the National Amalgamated Furnishing Trades' Association (Glassworkers' Section), and held at the offices of the London Chamber of Commerce, an agreement has been arranged by which all points of dispute have been settled by mutual consent. The agreement fixes the number of hours, the rates of wages, payment of overtime, allowances for meal-times, number of apprentices, &c., provides for the settlement of future differences between the parties, and remains in operation for 12 months. The men, who had been on strike for six weeks, returned to work on Sept. 8.

Livestock in China Shops.—The glass and china establishment of Mrs. Banje, Yeovil, was recently invaded by a flock of 28 sheep. The animals were being driven through the town, when one entered the doorway. The others followed, and a good deal of the stock of crockeryware inside was scattered on the floor. Before the sheep could be ejected, a great deal of damage had been done. J. Pittock & Son, High-street, Deal, have been still worse sufferers through the vagaries of a flock of sheep, which entered the premises and ran into the interior of a window displayed with china. The goods on show were wrecked, mirrors were smashed, and pedestals and stands overturned, while one of the large plate glass windows was cracked. The damage done is estimated at nearly £40. On Sept. 2 a pig ran into the shop of Messrs. Turner, glass and china dealers, High-street, Watford, and did almost as much damage to the stock as the proverbial bull before it was turned out.

Workhouse Crockery Prices.—At a meeting of the Brighton Board of Guardians, on Sept. 16, a member called attention to prices paid for crockery ex-contract, and instanced 3s. 9d. for four breakfast cups and saucers and 1s. 5d. for a milk jug. These prices, he said, were too high. Mr. Jarvis also took exception to the prices of 2s. 8d. for six soup plates, 1s. 9d. for a gravy ladle, on the ground of extravagance. Dr. Whittington contended that these articles should not be purchased in such small quantities. The Board adopted a motion against paying the prices mentioned.——At a meeting on Sept. 17 of the Rochford (Essex) Board of Guardians, a discussion ensued relative to tenders received for the supply of earthenware. The Tenders Committee recommended that no tender should be accepted, but that goods should be ordered as required, this being considered the most satisfactory course to adopt. Mr. Bedwell observed that a number of tenders had been received, and they should be laid before the Board. Eventually it was decided that the matter should be referred back to the Committee, with instructions to send out a few invitations to tender for what articles were required.

Lead Poisoning in the United Kingdom.— The total number of cases of lead poisoning reported to the Home Office under the Factory and Workshop Act during August, 1913, was 42, of which 1 was fatal. In addition there were 21 cases of lead poisoning (3 of which were fatal) reported among house painters and plumbers. During the eight months ended August, 1913, the total number of cases of lead poisoning reported under the Factory and Workshop Act was 373, as compared with 384 in the corresponding period of 1912. The number of deaths was 15 in 1913, as compared with 33 in 1912. In addition, there were 175 cases of lead poisoning (including 24 deaths) among house painters and plumbers in the first eight months of 1913, as compared with 159 cases (including 28 deaths) in the corresponding period of 1912. Of the 42 reported cases of lead poisoning in August last under the Factory and Wokshop Act, there were 4 cases in connection with the china and earthenware trades, 3 of the persons affected being females. During the eight months ended August, 1913, there were 47 reported cases, and 6 deaths in our industries as compared with 55 cases and 13 deaths during the corresponding period of 1912.

British Pottery and Glass Manufacturers' Annual Fair, 1914.—Under the above title an undertaking is now being organised by a committee of fifty leading manufacturers in the hope of inaugurating an important annual event in the life of Staffordshire potters. It is to take the form of a fair, at which each manufacturer shall have a private showroom on lines similar to those employed in various European centres. It has been thought that many American and Colonial buyers are in the habit of going annually straight to the Leipzic Fair, which, as everybody knows, is held towards the end of February. The suggestion has been raised that in consequence of this a good deal of trade is passing over that might well be kept in the United Kingdom. As we have already reported, meetings have been held during the last few months with the idea of organising a pottery fair to be held in Stoke-on-Trent from February 16 to 28, 1914. The town halls have been bespoken for the occasion. We are asked to state that ninety manufacturers have already finally booked their space, and others are expected to come into the scheme. Mr. J. T. Herbert Bailey is the chairman of the Committee, and the secretaries are Mr. Jas. A. Wood, Oriel Works, Hanley, and Mr. J. Paterson Brodie, Lloyd's Bank, Chambers, Burslem, from whom full particulars may be obtained.

The British Luxfer Prism Syndicate, Ltd., has sent us a copy of an official report of the British Fire Prevention Committee recording the results of fire tests carried out on three window openings filled in with "Luxfer" electro-glazing. The object of the test was to record the effect of a fire of 90 minutes' duration, the temperature to reach 1,500 deg. Fahr. (815·5 deg. C.), but not to exceed 1,650 deg. Fahr. (898·8 deg. C.), followed by the application of water for two minutes on the fireside with a view of being classified as affording "partial protection (Class A)." The openings were numbered Nos. 1, 2, and 3. Opening No. 1 was filled in with a steel frame divided into two lights, of equal size, into which the glazing was fixed by angle iron stops. Opening No 2.—The glazing was bedded in a brick reveal, and was in two lights with a concrete transome between. Opening No. 3 was filled in with a steel frame divided into two lights, of unequal size, into which the glazing was fixed by angle iron stops. Note.—One panel of the glazing in opening No. 3 was above the standard size of 2 ft. by 2 ft. (0·61 m. by 0·61 m.). Within two minutes of lighting the gas the glazing in each opening commenced to crack in various directions and continued to do so during the test. Opening No. 1.—Neither fire nor water passed through the glazing. Classification: Partial protection (Class A) was obtained. Opening No. 2.—Fire did not pass through this glazing, but on the application of water the force of the jet caused five small holes in the lower light, one in each of five squares. Classification: Partial protection (Class A) was obtained. Opening No. 3. —Neither fire nor water passed through this glazing. Classification: Partial protection (Class A) was obtained.

The Electrical Treatment of Lead Poisoning.—Our New-

castle Correspondent writes :—It was Sir Thomas Oliver, a well-known physician of Newcastle-on-Tyne, together with Mr. T. M. Clague, of the firm of Mawson & Proctor, chemists, also of Newcastle, who discovered the curative properties of electricity in the case of patients suffering from lead poisoning, referred to in THE POTTERY GAZETTE for September. Experiments were first carried out by Sir Thomas and Mr. T. M. Clague on a rabbit, which had received lead into its food. The rabbit was treated with an electric bath, the fore feet being placed in one dish and its hind limbs in another. The positive pole was placed in the former and the negative in the latter, and under that treatment the rabbit, which was formerly paralysed, resumed its normal aetivity. In an interview on the subject Sir Thomas Oliver stated that the chief thing in any treatment was the elimination of the metal in order that the patient may recover from the effects of the poison, and that the new electric bath system did, for he had proved it locally on affected persons. The elimination was usually done by the sweat glands or kidneys, but in his method the lead passed into a bath in which the patient was immersed. The new treatment was deionisation, and the use of the low bath system was the special feature from the preventive and curative point of view. Sir Thomas stated that some Newcastle lead manufacturers were kind enough to enable him and Mr. Clague to put the system to a practical test upon their workmen. Walkers, Parker & Co., Ltd., Cookson & Co., Ltd., and others installed the apparatus of Mr. Clague, and fourteen men suffering from lead poisoning had been successfully treated in the baths. The idea of the treatment was to cure sufferers at the early stages and effectively remove all traces of the poison from their systems. They fitted up the electrical installation in the Tyneside factories mentioned, and arranged a system of arm and leg baths whereby several workmen could have the bath at the same time. The bath was given half an hour daily, with a voltage of 16 and an amperage of 20 to 40 milliampères. Nothing unpleasant was felt by the immersed man, and the current was regulated to suit a hyper-sensitive patient. Since this system proved successful many Americans have communicated with Sir Thomas Oliver on the matter, as well as noted lead manufacturers and scientists.

Ceramic Work at the Government Laboratory. — The report of the Government Chemist upon the work of the Government Laboratory for the year ended March 31, 1913, which has just been issued, states that the work for the Home Office Department consists largely of the examination of samples taken in connection with various Home Office Regulations and of special inquiries, mainly into matters affecting the health of workers in factories. As in previous years, a large number of pottery glazes were examined. The glazes consist of (a) " leadless " glazes, and (b) " lead " glazes. The lead glazes were examined for " soluble " lead, i.e., lead dissolved by hydrochloric acid of a strength equal to that usually present in the gastric juices. Certain manufacturers of pottery have undertaken to use glazes of restricted solubility, and as a rule the solubility limits are carefully observed. Fifty-eight glazes from various works where lead poisoning had occurred were analysed to determine both the total amount of lead and the amount of soluble lead present. In most of these cases almost the whole of the lead, frequently amounting to 30 per cent. of lead monoxide, was found to be readily soluble. Many Government Departments now demand that articles of china and earthenware shall be glazed with " leadless " glaze, and a large number of pieces of finished ware were examined as to their conformity with this stipulation for the Admiralty, Office of Works, Post Office, and the Prison Commissioners. A difficulty in connection with the testing of finished ware lies in the fact that " leadless " glazes may contain a small quantity of lead monoxide—the permissible amount being fixed at 1 per cent., to allow a margin for the small quantities which may be picked up from the grinding vessels and in the dipping tubs. The ware itself may also pick up lead from being fired in kilns in which lead glazed ware has previously been fired, or from being placed in saggars which contain lead. A " leadless " glazed piece of pottery, therefore, frequently contains a small proportion of lead, but the amount of lead which may be derived from the sources referred to during manufacture has been worked out in the Government Laboratory. In only a few cases was the amount of lead found in the glaze of the finished ware so great as to leave no doubt that ordinary lead glazes had been used in their manufacture. Amongst other matters dealt with for the Inland Revenue Department was the examination of certain clays with reference to their liability to Mineral Right Duty under the Finance Act of 1909-10.

The Shops Act.—Barrow-in-Furness Town Council, on Sept. 13, issued a draft order for glass and china dealers to close at 7.30 p.m. on Monday, Tuesday, and Wednesday ; 1 p.m. on Thursday ; 8.30 p.m. on Friday, and 10 p.m. on Saturday, the order not to apply to the six week days immediately preceding Easter Monday, Whit Monday, and the August Bank Holiday, to the week days from Dec. 13 to Jan. 4 inclusive, and to the two week days before the Tradesmen's Annual Holiday, or any special public holiday. Objections or suggestions relating to the order must be sent before Oct. 20 to the Town Clerk, Mr. L. Hewlett.——Cheshire County Council have been asked to make a closing order for traders at Ellesmere Port to close at 8 p.m. on Monday, Tuesday, and Thursday ; 1 p.m. on Wednesday ; 9 p.m. on Friday ; and 10 p.m. on Saturday.——Tredegar Urban Council, on Sept. 10 issued a draft order for glass and china dealers in the town to close at 7 p.m. on Monday, Tuesday, Wednesday, and Thursday ; 7.30 p.m. on Friday ; and 10.30 p.m. on Saturday, with 11 p.m. on Christmas Eve and on Saturdays prior to any Bank Holiday. Objections or suggestions relating to the order must be sent before Oct. 13 to the clerk, Mr. H. J. C. Shepard.——Mr. Samuel Pope, who some time ago held a Home Office inquiry at Blackpool into the working of the Shops Act, has recommended the Town Clerk to make an order for closing by glass and china dealers, &e., at 7.30 p.m. on Monday, Tuesday, and Thursday ; 1 p.m. on Wednesday ; 8 p.m. on Friday ; and 10 p.m. on Saturday.——At Crewe, a vote is to be taken on a proposed order for closing at 8 p.m. on Monday, Tuesday, Wednesday, and Thursday ; 7 p.m. on Friday ; and 10 p.m. on Saturday.——Devon County Council have issued an order for glass and china dealers at East Stonehouse to close each Wednesday at 1 p.m.——For glass and china dealers in the North, South, East, and West Wards at Birkdale, the Health Committee of the Southport Town Council have decided to make an order for china, glass, and earthenware dealers to close on Tuesdays at 1 p.m.——Holbeach (Lincs.) Urban Council have issued an order fixing Wednesday as the early closing day for glass and china dealers.——Heanor, Codnor, and Loscoe Urban Council have decided to make an order for the glass and china trade to close on Wednesdays at 1 p.m.——The Devon County Council have sealed orders for glass and china dealers at Ottery St. Mary, Morte-Hoe and Woolacombe, and North Tawton, to close on Wednesday at 1 p.m., and those at Witheridge on Thursday at the same hour.——An order has been issued by the

Herts County Council for glass and china dealers at Barnet to close each Thursday at 1 p.m. For those trading in the High-street the following additional closing hours are fixed :—Monday, Tuesday, and Wednesday, 8 p.m. ; Friday, 9 p.m. ; Saturday, 10 p.m. ; the order not to apply to the Friday preceding a Monday bank holiday, or the three week-days (excluding the early closing day) before Christmas Day.——Thursday has been fixed by the Urban Council as the early closing day for the glass and china trade at Brumby and Frodingham (Lincs.).——At Bushey (Herts) an order has been made for glass and china dealers to close each Wednesday at one o'clock.——The Lancs. County Council on Sept. 19 issued an order fixing Wednesday as the early closing day for glass and china dealers at Cleveleys-by-the-Sea, in the urban district of Thornton, Tarleton, and such portion of Hesketh Bank in the township of Hesketh-with-Becconsall as lies to the south of the Lancashire and Yorkshire Railway.——Wednesday has been adopted as the early closing day by all traders at Dronfield (Derbyshire), and the Urban Council on Sept. 15 decided to make an order to that effect.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette," and are strictly copyright.

Mr. T. L. Barrett, Waterloo House, Peterborough, is starting a glass and china shop in Midgate as soon as the premises are ready.

Mr. Herbert West, 317 and 83, High-road, Wood-green, glass, china, and earthenware dealer, is opening a branch glass and china stores at 76, Myddleton-road, Bowes Park, N.

Mr. N. J. Indekeu, agent for Comptoir des Produits en Albatrine, Dolhain (Belgium), late of No. 41, Finsbury-pavement, E.C., has taken offices in "Gamage Building," 118-122, Holborn, E.C.

The business of Mr. Thaine Allen, in London, is being discontinued by his executrix. Mr. Georges Dreyfus will in future buy in this City for the new firm of Allen, Wack & Co., Ltd., at Delagoa Bay, and has taken the offices at 6, Lloyd's-avenue, E.C., recently occupied by Mr. Thaine Allen.

TENDERS ACCEPTED.

For the Prescot Guardians :—Mr. T. Shufflebotham, Liverpool, earthenware.

For the Whitechapel Guardians :—Earthenware, A. and E. Shepherd, £69 19s. 5d.

For the City of London Guardians :—Glass and earthenware, A. and E. Shepherd.

For the Wycombe Guardians :—Earthenware, Mr. J. Gower, Princes Risborough.

For Coventry Guardians :—Mr. W. Berry, Coventry, earthenware goods (6 months).

For the Portsmouth Guardians :—Hancock & Son, Portsmouth, crockery for the workhouse, £6 14s.

For the Brighton Guardians :—Maw, Son, & Sons, Aldersgate-st., E.C., bottles, jars, &c., for dispensary, £38 14s. 9d.

For the Kingston-on-Thames Guardians :—Mappin & Webb, Oxford-street, W., and Mr. W. Huntsman, Upper-street, N., crockery ware.

For the supply of crockery, &c., to the new Open-air Recovery School, for the Kettering Education Committee : —S. Clowes & Co., £10 11s. 11d. (accepted), plus 3d. per doz. for badging.

For the Strood (Kent) Guardians :—Cuxsor, Gerrard & Co., Ltd., Oldbury, White earthenware slipper bed pans 25s. doz., ditto medium 29s. doz., ditto large 33s. doz., feeding cups (white) 3s. 9d. doz ; white spitting cups, 3s. 9d. doz. ; hot water bottles 21s. doz.

For Trowbridge and Melksham Guardians :—Mr. A. H. Manning, Melksham, earthenware.

For the Camberwell Guardians :—Earthenware and china for 12 months, Mr. W. Huntsman.

For Colchester Guardians :—Mr. W. Cheshire, Colchester, appointed china merchant for six months.

For the Worcester Union :—Basins (two pints) 4s. 9d. doz., dinner plates 3s. doz., spittoons 12s. doz. (limited number), K. and A. Gee, High-st. ; pudding basins 1s. 6d. to 5s. doz., egg cups 1s. doz., china tea cups 2s. 6d. doz., glass salt cellars 1s. doz., mugs 3s. 3d. doz. glass mustard pots 2s. 9d. doz., china saucers (white and gold). 1s. 6d. doz., spittoons 12s. 6d. doz., tumblers 2s. doz., Worcester House, Ltd., Broad-street.

For the Wolverhampton Guardians :—W. Adams & Co., chambers, £3 12s. gross ; pint mugs, £1 1s. gross. ; meat dishes, 10s. doz. ; vegetable dishes, 11s. doz. ; tea plates, 1s. doz. ; white and gold tea cups, 1s. 5d. doz ; cups, 1s. 1d. doz. E. Coaney & Co., Ltd., hot water bottles, 12s. doz. ; egg cups, 10d. doz ; water bottle glasses, 1s. 10d. doz. ; salt cellars, 1s. 8d. doz. ; tea pots (24's), 5s. 3d. doz., ditto (36's), 4s. 3d. doz ; tea cups and saucers, 3s. 8d. doz ; coffee ditto, 5s. 6d. doz ; tea plates, 2s. 6d. doz. ; vegetable dishes, 18s. doz. ; tureens, 18s. doz. ; set of three meat dishes, 28s. doz. sets. ; dinner plates, 3s. doz.

LIMITED PARTNERSHIP.

Glenvavet Fireclay Co.—(31).—Registered in Edinburgh, Office, 65, West Regent-street, Glasgow. Partnership from Aug. 6 until determined by general partners. General partners : D. R. Forrest, W. Forrest, F. L. Reid, J. Eskdale, and J. Munro. Limited partners : C. Wood, Jessie M. Southern, W. Ross, D. Forbes, J. Eskdale, senior, Margaret B. Wilson, F. W. H. Reid, and H. Patrick.

NEW COMPANIES, COMPANY REPORTS, &c.

Glenboig Union Fireclay Co., Ltd.—The directors have declared a dividend of 15 per cent. and £1 per share bonus, making a return of 30 per cent. The gross profits were £57,000.

Bearsted Brick Co., Ltd.—Rd. No. 131,037.—This private company has been registered with a capital of £3,000 in £1 shares. Objects : To carry on the business of manufacturers of and dealers in all kinds of tiles, pottery, &c. The subscribers are E. Vaughan, Kelsale House, Maidstone, and two others.

L. K. & G. Synd, Ltd.—Rd. No. 130,969.—With a capital of £100 in £1 shares, this private company has been registered to carry on the business of manufacturers of earthenware, &c. The subscribers are B. B. Kingsford, Whiteholm, Laurel-road, Barnes, S.W., and F. D. Massey Gordon, 3, Lombard-street, E.C.

J. Salmon & Son, Ltd.—Rd. No. 131,009.—With a registered capital of £40,000 in £1 shares (25,000 preference), this private company has been registered to carry on the business of china, glass and earthenware dealers, &c., and to adopt an agreement with H. S. Salmon and A. G. Salmon. The subscribers are H. S. Salmon, Nerok, 69, Fox-lane, Palmer's Green, N., and A. G. Salmon, 89, Parkhurst-road, N., who are also first directors.

Cunnell & Co., Ltd.—Rd. No. 131,002.—This private company has been registered with a capital of £25,000 in £1 shares, the objects being to take over (a) the business of brick manufacturers and merchants carried on as "Charles Cunnell" at Catton, Sprowston and Hellesdon, Norfolk, and (b) the similar business carried on by R. G. Lincoln and F. J. Lacey at Sprowston, aforesaid, as "Lacey & Lincoln, Ltd." The subscribers are C. D. Cunnell, 1, Mount Pleasant, Norwich, and three others.

Manchester Marbleite Floor and Wall Co., Ltd.—Rd. No. 130.810.—This private company has been registered with a capital of £2,000 in £1 shares, the object being to carry on the business of manufacturers and layers of flooring and walling by a process known as "Marbleite," manufacturers of and dealers in tiles, pottery, earthenware, china, terra cotta, and ceramic ware of all kinds, &c. The subscribers are W. P. Stelfox, 19, Grosvenor-place, Ashton-on-Mersey, Cheshire, and two others.

Spring Packing Case Co., Ltd.—Rd. No. 130,773.—This private company has been registered with a capital of £5,000 in £1 shares (1,000 preferred), to carry on the business of manufacturers of boxes, cases, fittings, and the like for the carriage or storage of bottles, jars and other goods, &c., and to adopt an agreement with E. Hales. The subscribers are T. Morris, Herbert-street, West Bromwich, F. Usherwood, Slaithwaite-road, West Bromwich, and a clerk. Registered office : George-street, West Bromwich.

Robert Candlish & Son, Ltd.—Rd. No. 130,896.—This private company has been registered with a capital of £1,000 in £1 shares with the object of carrying on the business of glass bottle manufacturers as formerly carried on by Robert Candlish & Son, Ltd. (in voluntary liquidation) at Seaham Harbour, Durham, and at Rotherhithe, London, and to adopt an agreement with the United Glass Bottle Manufacturers, Ltd. The subscribers are J. J. Candlish, Shottin Hall, Castle Eden, and two others. Registered office : The Bottle Works, Seaham Harbour.

Dogsthorpe Star Brick Co., Ltd.—Rd. No. 131,079.—This private company has been registered with a capital of £14,000 in £1 shares (4,000 preference). Objects : To take over the business of a brick manufacturer carried on at Dogsthorpe, near Peterborough, by Matildo Hill, as the "Star Pressed Brick Co.," together with all the assets (except book debts), but including all the lands, hereditaments, machinery and fixed plant and shares in other companies mortgaged to the Stamford, Spalding and Boston Banking Co., Ltd. (in liquidation). The subscribers are J. E. Hill, Cowgate-chambers, Peterborough, and R. W. Hill, 14, Archway-road, Upper Holloway, N. Registered office : Cowgate-chambers, Peterborough.

Harrods (Buenos Aires), Ltd.—Rd. No. 131,101.—This company has been registered with a capital of £1,512,000 in 600,000 6½ per cent. cumulative preference and 900,000 ordinary shares of £1 each and 240,000 deferred shares of 1s. each, to carry on in Buenos Aires, Argentine Republic and elsewhere in South America the business of manufacturers of and dealers in household furniture, glass, and other articles for household use, and to adopt agreements with Harrods (South America), Ltd., Harrod's Stores, Ltd., R. W. Burbidge, and two with W. Hendel. The subscribers are H. Spinks, 37, Fletching-road, Clapton, N.E., and six other clerks. Secretary and registered office : R. H. Griffith, 87-135, Brompton-road, S.W.

China Clay Corporation, Ltd.—The report adopted at the meeting on Sept. 26 covers the year ended June 30, 1913, and shows that expenditure on the works during the year amounted to £15,753. The temporary plant referred to in the last report was erected, but this could not be brought into use, because towards the end of 1912 it became quite evident that the pipe line for the conveyance of the liquid clay to Cantrell has been constructed in a very defective manner, and the work necessary to remedy this was, under advice, taken out of the hands of the contractor and has been carried on by the corporation with all speed. It is expected that this work will be completed during the month of October. For the loss which the corporation has sustained owing to the delay in the completion of the pipe line and its faulty construction, proceedings have been instituted against the parties responsible. The report from Mr. Mutton, the works manager, states that all the constructional work necessary for producing clay excepting the pipe line has been completed. The rise passed through 100 ft. of excellent clay to the surface. There is every reason to conclude that this deposit goes down for a considerable depth.

Liens, Debentures, Satisfactions, &c.—Prideaux China Clays, Ltd., Plymouth.—Reg. £3,000 mort., to Alice de Bertodano, 22, Chester-terrace, Regent's Park, London, N.W., spinster, and others ; charged on land near Prideaux Wood, Luxulyan (Cornwall).——English China Clay Co., Ltd., London, S.W.—Reg. £20 debentures, part of £20,000 ; general charge.——Universal Non-Refillable Bottles, Ltd., London, E.C.—Reg. £200 debs., to J. W. Vickers, 5, Nicholas-lane, E.C. ; general charge.——Aylesford Pottery Co., Ltd.—Reg., trust deed supplemental to trust deed of April 1, 1908, securing a total series of £9,000 debs., amount of present issue being £1,500 ; charged on leasehold land and premises at Aylesford and Boxley, also a general charge.——Boote (T. & R.), Ltd., Burslem.—Reg. £3,500 mortgage, to J. T. Howson and ors. Eastwood Sanitary Works, Hanley ; charged on freehold tile works, with fixed machinery and fixtures, in Festing-street, Hanley.

Foreign Notes.

State-owned Glassworks in Bavaria.—It is reported from trustworthy sources that, from July 1, 1914, the Vopelius glassworks at Schnappach has become the property of the Bavarian Government. It has been ascertained that these works are situated above an extensive deposit of coal, the working of which will extend the life of the pits in the locality for a number of years. The workings have already been the cause of extensive damage to house property through surface subsidences, and, since the State has to make good such damage, it is believed that the purchase of the glassworks is for the purpose of avoiding the risk of having to pay a heavy indemnity to the present owners, who will in future lease the works and carry on the business at their own risk.

The Imports of Glassware into Barcelona are declining in ratio as home industry develops. The imports of hollow-glassware however, increased slightly last year, the countries of origin being England, Germany, and France. Glass, crystal and semi-crystal goods were imported to about the same extent as in 1911, the trade being done by France and Germany. The imports of table-glass declined 50 per cent., which came from Belgium and France, the balance being of Spanish origin. Window-glass has also declined, to the detriment of Belgium. A relatively marked increase is noted in the importation of glass slabs for floors and roofs and of glass-beads ; the latter are chiefly French, whilst the former come from Belgium. In earthenware, china ware, and pottery ware an increase has taken place all round, and a steady advance is also expected in the demand for fire-proof bricks, and similar goods.

The Italian Glass Industry, which never seems to have prospered greatly, again suffered severely last year due to the strikes amongst the glass blowers. The unions demanded the renewal of the agreements which had expired with the Société Vetreria Riunite, which own a large number of factories ; however, the employers were not able to grant this in view of the increased price of coal, coke, sand, potash, &c., the bad state of the market in general, and the increased imports of glass which had greatly depressed prices all round. The result was that the factories were at a standstill for several months, common cut, pressed, and medical glass goods being most

affected. Table glass and bottles were not affected by the strike. Fortunately, business was not much prejudiced by this long strike, as increased imports, and large home production had created large stocks which it was thus easy to place. If anything, the state of affairs was thus somewhat improved. No new flotations have taken place in this industry.

Cut Glass in China.—Last year a large retail merchant in Hongkong imported a small assortment of American cut glass in order to find out what possibilities the local market afforded for the importation of this class of goods. The sales realised gave considerable encouragement, so that in the near future a larger and more varied range will be imported. This is the first time that cut glass has ever been shown in Hongkong, that is to say rather to any considerable extent, as it was believed that the Chinese would not be interested in such articles of luxury, whilst the European population is only small. Still it has been found that the Chinese are ready buyers, having taken up about 60 per cent. of the lot offered as a trial. Cut glass is rather a novelty for the Chinese, but it appeals to their artistic ideas, and now-a-days anything Western is almost certain to meet with more or less ready acceptance. At present the market is not of much importance, but it is almost certain that in the near future cut glass will do very well indeed in the Celestial Empire.

Glass and China in Bulgaria.—The glass factory erected 14 years ago at Gebedsche, near Varna, closed for some time, but recommenced operation in 1909 ; last year good business was done, especially as the Government has given it the monopoly for the production of standard measure bottles and glasses for use in wine rooms, hotels, and the like. However, as the articles produced are mostly of inferior quality, the imports of better class foreign makes remain unaffected. Good quality beer bottles, demijohns, and green, brown, and white semi-opaque cognac, wine, and lemonade bottles come from Austria ; syphon bottles and ordinary lemonade bottles come from England. At Varna a lot of roofing tiles are imported, principally from Marseilles, the price being 80 fr. per 1,000 with 10 per cent. rebate, free Marseilles wharf, net cash. In china ware most of the better class and medium quality decorated plates are bought from Austria, but German competition is steadily growing acuter, especially in cheap table sets, coffee cups, and tea cups. In crockeryware Germany, France, and Austria do most, England doing very little.

Pottery and Glass Trade in Turkey.—Owing to the great increase in the activity in the building trade the local roofing-tile factories are unable to meet all the demand, and consequently large quantities had to be imported last year from France at the price of 70 fr. per 1,000 with 10 per cent. discount on board Marseilles. As building will continue to be still more extensive (especially now the war is over), and further orders may be expected for tiles, it is highly desirable for our industrials to pay increased attention to this article. Trade in glassware was about the same last year. Of hollow ware Salonica imports principally bottles, cut-glass goods, pressed glass articles, plates, services painted and other decorated articles (lamps, drinking sets, &c.). In hollow and cut-glass the principal trade is done by Hungary, Austria only doing a small turnover ; pressed glass is German, Belgian, and Austrian in origin. Medicine bottles were formerly got from Austria and Hungary, but now they come from Holland and Belgium. Window glass is supplied by Belgium, Austria, and England. England has begun to press trade energetically, and are allowing a rebate of 63 to 64 per cent. French competition has been quite ousted. Business in porcelain ware lays mostly in German and Austrian hands ; table, toilet, kitchen, and other sets of goods are mostly in request, cheap qualities being in demand.

Earthenware in Egypt.—An article from the "Bulletin Commercial" of Brussels, quoted in the "Board of Trade Journal," states that there is a good opening in Egypt for low-priced earthenware. In Alexandria many Arab merchants carry on a trade in these articles, but it is considered preferable to appoint a responsible agent rather than do business direct. The articles most in request are table services, basins with or without lids, egg-cups, jugs, &c. Plain white ware, as well as coloured goods decorated with flowers or vivid designs, is stated to be suitable for the Egyptian market. In Cairo, porcelain goods for the European population are in considerable request, but earthenware for native use is in even greater demand. Especially noteworthy in the latter category are the round rice bowls, either with or without feet ; they are somewhat crudely decorated. Formerly they were imported decorated with showy patterns, but at present the preference is for white goods with gold borders. Next in order come jars with lids, the most popular being those ornamented with gold flowers. So-called Turkish cups on little trays find a ready sale, as do Turkish glasses with a stem. Latterly, toilet sets, oval trays, and tea cups and saucers have been much in request. Prices should usually be quoted c.i.f. Alexandria. The best season for travellers to visit Egypt is in the spring, when orders are placed for the winter.

Pottery and Glass in Servia.—In the ceramic industry the old Belgrade factory has now been supplemented by a second establishment which produces tiles for floors, pipes and similar articles for water supply purposes, drainage and the like. Owing to the various new industrial undertakings now planned, and partly in execution, Servia should require at least 400 truck-loads of pipes annually for some years to come. A small factory at Leskovac, for making tile stoves and the like, has increased its output, and is taking steps to still further improve its system of production. In tiles and slates the demand is much better, owing to the increased building activity. The Belgrade firms have now combined to form a syndicate, and prices (which have already been increased by 45 dinars) show a tendency to rise further. At Nisch two large new kilns have been put down, and new installations are also in progress at Leskovac, Vranja and Pirot. Special attention is is being given to the production of fluted roofing tiles. An innovation in Servia is the establishment of two sand and limestone factories, which are doing very well. The only hollow-glass factory at Paracin has made very good progress since it has been in the possession of the "Beogradsak Zadruga," and the last business year closed with a profit of 15 per cent. The value of the output has already attained a sum of 500,000 dinars. In common hollow glassware it now covers nearly all the demand, and, as soon as the second kiln has been put down, it will also cover the demand for beer bottles and pressed glassware. The qualities made gave every satisfaction. The table-glass factory at Kostolac made about 50 truck loads, and has secured a considerable portion of the home trade. The factory will be developed still further, as it has received a State subvention of 20,000 dinars.

U.S. Pottery Imports from Germany.—The export trade in porcelain and pottery in the Coburg district of Germany, according to a U.S. Consular Report, as a whole, did not improve over 1911, although some branches showed gains. The export trade to the United States seems to be declining, owing to American competition and import duty. The exports to the United States have decreased from $2,242,892 in 1907 to $719,848 in 1912. The greatest drop occurred in 1910, when the exports fell from $1,888,581 to $735,723, the decrease being due to a change in this district and to the buying of goods by German exporters in other districts, who declared their exports

through other consulates. Prices for materials have been practically constant, the chief exception being Bohemian coal. Table china showed no improvement in sales over 1911, and the purchases by the United States and some other countries decreased. The exports to other countries improved slightly, the best gains being made in the trade with Holland, India and Belgium. The manufacture of technical and electro-technical porcelain was the most active branch of the industry, and on it the manufacturers place their hopes for the future. Although wages increased steadily, trained workers were scarce, especially women. Nearly all the manufactured articles needed in the manufacture of these products rose in price, some as much as 25 per cent. Nevertheless, the prices of the finished products remained unchanged. It is said that the price received for insulators barely covered the cost of production. The manufacture of painted porcelain can hardly be said to be doing well, although the exports to the United States were larger in 1912 than in any of the preceding five years. This, however, does not mean a large trade, as the sales to the United States never exceeded $550 in one year. German and Swiss concerns do business only on commission, and they have not done well. The tablets on which these paintings are made are difficult to produce, as they must be absolutely flawless. As the cost of production increases as the number made decreases, the price of the finished article must necessarily increase. The trade in china marbles rose sharply in 1912, but not enough to counterbalance the drop in 1911. The exports of glassware to the United States in 1912 for the first time exceeded those of 1907, the shipments for the intervening years ranging from $142,400 to $148,500.

The Leipzig Michaelmas Fair.—(From a Continental Correspondent.)—The Fair, which has just been concluded at Leipzig, opened very dull, owing largely to holidays, the visit of the Zeppelin airships, exhibitions, and other causes, so that exhibitors were not at all satisfied with the sales effected. The hopes entertained that things would improve as time wore on have not altogether been realised. In most cases this year exhibitors came to Leipzig with modest expectations, but even these have not been quite fulfilled, and many firms complain that they have booked no orders at all. The political horizon has undoubtedly cleared up considerably, but the after effects can hardly be expected to pass over like a summer cloud speeding before the wind. The rainy summer has also destroyed trade extensively, and all tends to make money scarce. Throughout Germany business in all branches is depressed ; the poorer classes have no money, whilst those who are more well-to-do have lost all desire to purchase anything, owing to the Wehrsteuer (Defence Tax), and other new demands. One hears complaints daily from business men on this score. Hence those who are wise in Germany only buy what is necessary, and keep their home and dress modest. The visitors consisted mostly of Germans, Austrians, and buyers from adjacent districts. Only very few Balkan, Oriental, English, and other oversea buyers were to be met with. Not many novelties were shown, as manufacturers prefer to keep these till the Easter Fair, that being on a larger scale and affording more scope for business. Inland buyers, who usually purchase most of what they want at Christmas and Easter, placed several orders, but taken altogether, the total bookings at the Fair this year have been much below the figures noted in 1912. As the Leipzig Fairs are almost always a true mirror of the general state of the business and economic markets, it will be apparent that things are still in a very reserved and uncertain condition. The exhibitors comprised 4,000 firms, and their stands without exception were worthy of praise in every respect, on the score of neatness, attractiveness, and wealth of display. Many novelties were not shown, and so-called " Sight-Sellers " were very sparsely represented. As regards the different branches of trade, orders in the glass branch have left very much to be desired, and firms state that the orders booked are only about half of the returns for 1912. Toys of wood, wax, china, textiles, &c., were very much neglected, and next to nothing was done for export. The movement in the porcelain, china and crockery branch was more satisfactory, and several very good orders were secured for domestic and kindred articles, but in high-class porcelaine de luxe only a few very well-known firms did some moderate business. Some beautiful groups, statuettes, figures, lighting devices for electricity, toilet and desk accessories were shown, and attracted admiration, but in spite of that buyers were reserved, only seeming inclined to loosen their purse-strings when something of a practical nature was in question, such as a dinner service, set of jugs or basins, and so on. In fact, expensive artistic ornaments, and so on, in silver, bronze, brass, nickel, &c., were neglected.

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.

ASTEROID. 353,065. Glass. Class 15. Glassworks, Josef Inwald A., 69, Farringdon-rd., London, E.C.

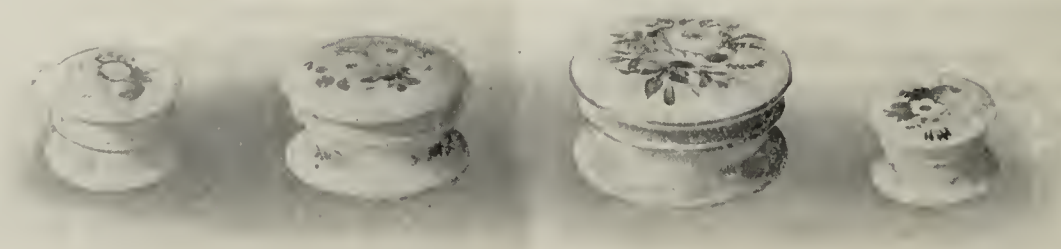
SANCONTAS. 353,850. All goods included in Class 16. Johnson Brothers (Hanley), Ltd., Eastwood-rd., Stoke-on-Trent.

GLASICA. 353,954. A compound of cellulose for use as a substitute for glass or other transparent material. Class 50. A. H. Selwyn, Ltd., 2 & 3, Lilypot-lane, E.C.

VALDA. 353,933. All goods included in Class 16. Also **APEX.** 353,932. All goods included in Class 16, but not including bricks and tiles, or any goods of a like kind. Johnson Fireclay Co., Ltd., Cliffe Vale, Stoke-on-Trent.

353,245. China clay. Class 4. St. Dennis and Parkandillick China Clay Co., Ltd., Biddicks-court, St. Austell.

ROCO. 353,055. Glass, but not including vacuum bottles or any goods of a like kind. Class 15. Rosenkaimer & Co., G.m.b.H, 48a, Greifweg, Dusseldorf-Oberkassel, Germany. Address for service in the United Kingdom is c/o G. F. Redfern & Co., 15, South-st., Finsbury, E.C.



POTTERY DISTRIBUTION IN THE EAST-END OF LONDON.

[BY A MEMBER OF OUR STAFF.]

OF the many metropolitan businesses to which from time to time we have had the advantage of referring in these columns, it may have been noticed that few have been situated at the East-End; but it must not, for that reason, be taken for granted that the East-End has not its pottery dealers, nor must the importance of the trade which is done here be regarded as negligible. Whilst the class of business which the East-End of London witnesses is—everyone will admit it—widely remote from that conducted at the West-End, in its way it is of paramount importance.

In order to give an illustration of what some of these businesses are like, we selected a typical case in the house of Mr. N. Donner, 36, Commercial-street, E., and late of 48, Middlesex-street, E., a wholesale distributor. The building, a four-storey one, situated in a principal thoroughfare, constitutes a solid block of warehouses, and but for the double window on the ground floor filled with an attractive assortment of ornamental and useful pottery—principally the former—one would hardly dream of what is going on inside. The writer, however, by the courtesy of Mr. Donner, was permitted to see through and to take notes of anything he wished. Naturally everything handled is of a very readily saleable type, and for such a class of trade the place is obviously designed. Plain deal fixtures in the form of pens, on precisely similar lines to those of a pottery manufacturer's warehouse, are everywhere apparent, and in these receptacles large stocks are kept of figures, vases, clock sets, and cheap ornamentals, as well as useful domestic pottery and glass ware, representing possibly every article that could be mentioned. Mr. Donner deals in both English and foreign lines; and although the latter were to be seen in profusion—the proprietor must, of course, be regarded as a bona-fide importer—there was a fair proportion of the well-known Staffordshire and other lines, principally in printed dinnerware. In addition to his trade in the United Kingdom, Mr. Donner does quite a proportion of shipping, a good deal of which concerns South Africa.

Owing to its great height we have been unable to show a photograph of the complete building, but from what we do show it will be seen that it is, as we say, specially adapted to a distributing business. A crane is manipulated from the top of the building, and feeds the three upper floors, the second and third of which are practically a replica of the first, at the door of which our photograph shows one of the warehousemen standing.

Doubtless from these few notes, interpreted in conjunction with the photograph, our readers will be able to form a fairly accurate impression of what an East-End distributing house is like.



AN EAST-END POTTERY WAREHOUSE. [*Photo. by "The Pottery Gazette."*

What is a Pancheon?—In a Manchester china shop the other day, writes a correspondent of the "Manchester Guardian," a friend of mine asked the shopkeeper for a pancheon. The dealer did not recognise the name as applied to articles which he called bread-mugs. A Southport correspondent suggests that "pancheon" and "bread-mug" are not quite synonymous terms, though a pancheon may be, and has been, used as bread-pan. Murray defines a pancheon as "a large shallow earthenware bowl or vessel, wider at the top than the bottom, used for setting milk to stand to let the cream separate, and for other purposes." Wright's Dialect Dictionary quotes the word in dialect use in many English counties as describing a vessel used especially for milk, though Murray says the word is sometimes applied to a "bread-pan" (he may mean a pan for dough in baking bread). But the "bread-mug" proper is an upright earthenware vessel slightly bulging in outline, narrow in proportion to its height, not much wider at the top than the bottom, and provided with a perforated lid. The word "mug" thus describes it much better than "pan." The compromise "pan-mug," though not found in the Dialect Dictionary, is also used, and is applied to the wider shape of vessel.

Fragments.

¶ Competition in the pottery trade only excites annoyance; but the latest POTTERY GAZETTE competition (p. 1137) is only calculated to promote good feeling.

* * *

¶ A well-known novelist was "spotted" in Paris as a Potteries man because he turned up a cup to see the trade mark on the bottom. The test, however, is not infallible, as the writer of this paragraph often does the same thing, though he has not the distinction of being a native of Staffordshire.

* * *

¶ If the lead poisoning caused by drinking water referred to on p. 1174 affected any potters, would their employers have had to pay them compensation? Also, do these cases afford an excuse for those who like their water to be diluted by alcohol?

* * *

¶ An American glass trade paper refers to "Bottle affairs at Boroklyn." By this name it is hard to recognise Brooklyn, which may be a boro' but is certainly not klyn or klein (little).

* * *

¶ The writer of the report on New Zealand quoted on p. 1161 says:—"It must be remembered that the route across America is becoming more and more a highway to Europe. Firms going home to get agencies are captured on the way across, and are impressed by the scale of manufacture, the hustle, and the big talk, and arrived home with their mouths full and little appetite left." It will be interesting to watch the effect of the opening of the Panama Canal on this state of things.

* * *

¶ When a duck lays an egg she just waddles off as if nothing had happened. When a hen lays an egg there's no end of a noise. The hen advertises. Hence the demand for hens' eggs instead of ducks'.

* * *

¶ The pottery auctioneer held up a gorgeously-coloured piece. "Ladies and gentlemen," he said with conviction, "I give you my personal guarantee that this colour will wear twenty years. I am a man of honour. You may rely on my word." "Will you be 'ere next Saturday to change it if it's gone by then?" said a sceptic at the back. The angry auctioneer then declared that he was only addressing the gentlemen in the audience.

* * *

¶ A DEAD LOSS.—Once upon a time there was a business man who lost—his temper—and thereby the goodwill of a customer—and thereby an immediate sale—and also the future business of that customer and his friends—and he gained—just nothing.

* * *

¶ The Workmen's Compensation totals (p. 1139) represent a heavy charge upon industry for which there is no direct return to the employer. Nor does he gain by more efficient service, as was shown at a recent inquest at the City of London Coroner's Court, concerning the death of a window cleaner, who was fatally injured through falling 50 ft. from a window. The manager of the company in whose employ the deceased was, said that accidents had been much more frequent since the Workmen's Compensation Act was passed, as the knowledge that they were "covered" made men careless.

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

ACCOUNTS of unsatisfactory business are still fairly general in the Potteries, though here and there one finds manufacturers who say they have not much to complain of, and very occasionally one hears of a firm that is quite busily employed. The net result appears to be that the demand is slightly better than it has been for the last two or three months. Nevertheless, anything but a confident spirit, prevails, and trade, both in the home and export markets, is considerably less buoyant and lower in value than at this time last year. The most optimistic report I have heard this month was from an earthenware manufacturer, whose business is with both home and oversea markets. "Our experience," he said, "is not unfavourable. Our order books are pretty full, and some new business is coming along, but what are keeping us busy are orders which came to hand late last year, and during the early part of this. New business is not coming forward in anything like the volume it then was. Our experience, however, is probably more fortunate than that of most manufacturers." It is doubtless the case that the firms which are busiest are engaged, not so much on recent orders, as on those which came to hand some time since.

So far as the home trade is concerned, this ought to be the briskest time of the year, and orders should be coming to hand abundantly for Christmas. That state of affairs does not, however, obtain this year, and the call for goods is not up to the standard of good times. The London market is still wanting in buoyancy, which means much to those who cater for the best class home trade. On the other hand, I hear good reports of business done in Scotland and in the North of England, where retailers are apparently finding and anticipating brisk sales. The widespread labour unrest, with its accompaniment of spasmodic strikes in many parts of the country, is undoubtedly contributing to the want of confidence that is generally characterising business. Moreover, many are of opinion that we are on the downward side of the cycle of good trade that has been enjoyed. That may be so, but the falling off is likely to be so gradual as to have little effect on employment and wages in the great industries of the country for some time at any rate, during this year. Therefore, there should be a substantial Christmas business awaiting china and earthenware retailers. In this connection, it may be well to remind those who are delaying the placing of their orders that the time is getting short for nowadays everybody requires earlier delivery of Christmas stocks than was formerly the case, and the sooner they secure their goods the better the chance of marketing them successfully.

From the manufacturers' point of view, the worst feature of the present trade conditions is the continued indication of a decline in export business. I do not mean that this branch is in a state of general depression—on the whole, it appears to be slightly better than during recent months—but the tendency seems to be on the down grade as compared with a year ago. The Canadian demand is not so good as it was a few months back, and

complaints are made with regard to Australia and South Africa in particular. Commenting on the condition of the shipping trade, a manufacturer recently remarked: "The consequence of a serious fall in export business, when it does come, is that it drives manufacturers who cater for foreign trade into the home market, and that makes it bad all round." Meanwhile, the question arises: Will the American Tariff reduction benefit manufacturers to any marked extent?

In the August issue, I stated that the new Tariff Bill would probably be signed on Oct. 1. The measure passed the Senate on Sept. 9, and the Bill then went to the House of Representatives for agreement with the changes made by the Senate. By the time this number is in the hands of its readers, the Bill will have been signed. So far as I can ascertain, no important alteration has been made in the provisions regarding pottery, which, briefly, are a reduction of 5 per cent. on china and 20 per cent. on earthenware. In conversation with the writer a local manufacturer expressed the view that the advantages of the decreased tariff would not be markedly felt until the spring. Orders placed now, he said, could not be executed and the goods shipped to America for sale this year; the results would be seen in next year's business. Asked as to the probable extent of the effect, he remarked: "Twenty per cent. reduction in the case of earthenware is certain to bring some benefit—the reduction in the case of china is too small to count—but I doubt whether it will bring back to this country the great bulk of trade in the cheaper class of earthenware, which formed so large a part of the American business up to, say, ten years ago. That has irretrievably gone to the American potters; our present trade is in goods of the highest quality, and will still be so, even with the lower tariff." He added that when he was in New York a short time ago, the opinion was expressed that the 20 per cent. reduction considerable though it was, was quite insufficient to influence trade in the cheaper classes of goods, and to recover the business now held by the American potters. Another manufacturer expressed the opinion that the reduced tariff would certainly be advantageous, but he did not now anticipate the great access of business which many predicted at the time of the introduction of the Bill.

The Clay strike in Cornwall, which has been in operation two months, is now being regarded with seriousness in the Potteries. It is the future rather than the immediate consequences of the stoppage which are giving cause for alarm. As a matter of fact, no serious inconvenience has as yet been felt, but unless there is a speedy settlement, a disastrous state of things will ensue. The position in the case of the large manufacturers is that they buy a cargo or so of clay, and store it at one of the Mersey ports—Runcorn, Weston Point or Ellesmere Port—bringing it by canal to their manufactories in the Potteries as they require it. Those who carry large stocks on the Mersey will be able to continue operations under present conditions for some time. Many of them, I learn, have sufficient clay to last them five, six, seven or eight weeks, so that they are not likely to suffer immediate inconvenience. In the case of small manufacturers, however, their custom is to buy, say, 20 ton lots from the clay merchants, and as the stocks of the latter are getting low, these manufacturers are finding a difficulty in replenishing their supplies. The Cornish clayowners, by reason of the stoppage, have now lost approximately 160,000 tons out of their annual output of about 1,000,000 tons, while the consumption of accumulated stocks has been proceeding at almost the usual rate. Even supposing the clay mines were all re-opened at once, the normal output would be impossible, for after mines—whether coal or clay—have been lying unworked for a period, much time is lost in reinstating them and putting them in proper working order. But that is not all. When the clay has been got it cannot be used at once, and a period of five or six weeks—I am informed—is required for refining and weathering. This suggests the probability of a wide gap between the time when the present stocks are exhausted, and the newly mined clay can be put to use. Potters, moreover, are not the only people who are wanting china clay. The cotton manufacturers of Lancashire, and the paper makers, not to mention the potters of foreign countries, are all anxious for future supplies; and when new clay is available, there is likely to be much competition for consignments. The potters often imagine they are the principal customers of the Cornish clayowners, but the shipments to the Potteries are small in comparison with the consignments to cotton and paper manufacturers. Clay prices have been hardening for some time, and the great demand and the limited supply which will ensue will certainly tend to further advances. The prospects, therefore, are gloomy enough. The marl strike in the Potteries made things exceedingly difficult a few months ago, but the position following the Cornish clay stoppage threatens even more serious consequences.

The miners' non-unionist question still remains unsettled at the time of writing, and though it is generally believed that a wholesale stoppage will be avoided, there is, of course, just a possibility of it taking place. This, therefore, is another cause for anxiety in the business circles of the Potteries. It will be recalled that the delegates' meeting of the North Stafford Miners' Federation decided that all persons employed "in or about" the North Staffordshire Mines must be members of their respective trade unions by Sept. 20; otherwise, notices would, if necessary, be tendered on Sept. 27 to cease work a fortnight from the latter date. During the month two joint manifestos have been issued by the four unions concerned—the North Stafford Miners' Federation, the Firemen, Examiners and Shotlighters' Association, the Enginemen and Stokers' Union, and the Navvies and General Labourers' Union. A federation of these four unions has been arranged, so that they may act together on the non-union question, and the manifestos strictly enjoined every mine worker to join his union. The last manifesto, issued on Sept. 16, stated that soon after the 20th a "show card" would be taken and all non-unionists reported. "The Federated unions," it went on to say, "are all agreed. Orderly, quiet, but drastic measures have been determined, ordered, supported and insisted upon by the organised workers. . . . The disloyalty of non-union men is forcing on a stoppage of all the collieries." This certainly threatens a general strike, but is there not another way out?

Since the movement was initiated, the men have been coming into their unions in considerable numbers. No information is yet available as to the number outstanding on Sept. 20, but the number must be a very small one, for a month ago only a few hundreds of the 30,000 workers were still outside the ranks. A general strike seems unreasonable and unnecessary, in order to coerce a few men into their unions. In some other districts, notably Lancashire, the final few have been brought into the unions by the means of tendering formal notices, and then bringing out the men at any particular pit where non-union workers were still employed. These sectional strikes have been of short duration, and while avoiding a general stoppage, have achieved the unions' object. The North Staffordshire unions are obviously determined to bring in the last few

stragglers, even at the expense of a strike, but it may now be assumed as probable that, if a stoppage does occur, it will be at individual collieries, and not of a general character.

Since the foregoing notes were written, a deputation of the four unions has waited upon the North Staffordshire Colliery Owners' Association, and invited the employers to assist them in the campaign. The coalowners, however, intimated that they could not interfere with the labour at the collieries, whether union or non-union, and suggested that the men's organisations might continue to employ the machinery of persuasion that they have so successfully employed, in order to bring into the unions the remaining workers. To this the men's leaders replied that a fortnight's notice to cease work would be tendered on the following Saturday (Sept. 27). The men's representatives obviously mean business. I interviewed a coalowner on the subject, and he stated that he supposed notices would be tendered, as stated, throughout the coalfield. Asked if he thought this would eventuate in a general strike, he replied that he did not think it would; he thought the pits where non-unionists were still employed would be stopped individually. That, was, of course, assuming the few stragglers still remained outside the unions at the end of the fortnight. Later: Notices to terminate all contracts of service were formally tendered to the colliery owners on Saturday, Sept. 27, on behalf of the North Staffordshire Miners' Federation and the three other unions acting with them. These notices will expire on Saturday, Oct. 11, so that the men still outside the unions were given another fortnight in which to join.

At the meeting of the Stoke-on-Trent County Borough Council on Sept. 25, it was reported that Alderman Philip Elliott, of Fenton, had consented to be nominated as Mayor for the ensuing year. Prior to federation Alderman Elliott was Chairman of the Fenton Urban District Council, and of the Fenton Education Committee. He is now Chairman of the Stoke-on-Trent Education Committee. At the same meeting the Mayor (Alderman F. Geen) presented his annual financial statement, from which it appears that though more money is required for the current financial year, the rates will be somewhat reduced so far as amounts in the pound are concerned. The reason for this is the fact that the Unions have recently been revalued, and the assessments increased. Therefore, although ratepayers will be called upon to pay apparently lower rates, they will in reality be required to find more money—that is, unless they are fortunate enough to have had their assessments left at the old figures. The rates for 1913-14, as compared with 1912-13, will be as follows:—Tunstall, 8s. 3d., compared with 8s. 4½d., a decrease of 1½d.; Burslem, 8s. 1½d., compared with 6s. 2d., an increase of 1s. 11½d.; Hanley, 9s., compared with 9s. 2½d., a decrease of 2½d.; Stoke, 7s. 9d., compared with 8s. 0½d., a decrease of 3½d.; Fenton, 6s. 4½d., compared with 6s. 1d., an increase of 3½d.; Longton, 7s. 10d., compared with 7s. 11d., a decrease of 1d. The increases in the case of Burslem and Fenton are due to the fact that in last year's rates credit was given for large unspent balances which had accumulated at the time of federation, and which were then disbursed in the way of reduction in the rates.

As stated in last month's notes, an inspection of the Harecastle (new) canal tunnel, which has been affected by subsidence, has been made by Lieut.-Col. E. Druitt, on behalf of the Board of Trade, and his report is now to hand. The result is that he supports the policy of the North Staffordshire Railway Co. (the owners of the canal) in regard to the repair of the tunnel. He states: "The new tunnel is 14 ft. wide, of which 5 ft. is taken up by the towing path, leaving 9 ft. waterway, and the average headway above water level in the parts that have not subsided, or have done so almost inappreciably, is 9 ft. 6 in. . . . Assuming the original height of the crown of the arch of the tunnel to be 10 ft. above the water level (but it may have been some inches lower), then from the Harecastle end of the tunnel to about the 500 yards mark the average subsidence is about 6 in. From the 500 yards mark to the 700 yards mark the average is about 1 ft. 6 in., and from the 700 yards mark to the 1,500 yards mark the average amounts to from 2 ft. 3 in. to 3 ft. 3 in. From the 1,500 yards mark the subsidence diminishes, and from the 1,600 yards mark to the Chatterley end of the tunnel the average subsidence is from 3 in. to 4 in. A length of 11 yards of the arch at its worst place, between the 900 yards mark and 1,000 yards mark, was rebuilt during the coal strike last year, giving the full 10 ft. height above water level, and is standing very well. During the holidays at the beginning of this month (August) a further length of 60 ft. of the arch was rebuilt at the lowest part, about the 1,000 yards mark, giving a 10 ft. headway above water level. As the canal can be closed for only short periods such as the late holidays without interfering with the traffic, only short lengths can be dealt with at a time. . . . From the opening up of the arch of the tunnel where the new work is in progress, it can be seen that the whole surrounding ground has bodily subsided with the tunnel, as the rock is in contact with the outside of the arch, and it is not the tunnel alone which has subsided.

"As far as I could judge there have been no very recent subsidences anywhere in the tunnel, and I am informed that the greatest amount took place prior to 1903, and has been little in the last two and a half years, and during the past year almost imperceptible; and, although it is impossible to forecast with accuracy what may happen in a district with old mine workings underneath such a tunnel, I do not think there is ground for apprehending any further serious subsidence. The company have purchased all the coal underneath all three tunnels (the old and new canal and the railway tunnels), and for a space of 40 yards outside the two canal tunnels, and are still purchasing further seams when it appears advisable. I think the course they propose, viz., to go on rebuilding the arch of the tunnel and headway of 10 ft. above water level as opportunity occurs, is the best method to adopt without unduly interfering with the traffic. This could be done much more quickly if the traffic through the tunnel could be stopped for a longer period, but this must depend on the local trade conditions. The traffic is conducted by horse traction, and a certain amount of inconvenience is caused by the towing path being under water for a certain length where the subsidence exceeds 2 ft., but the company are intending, I understand, to make a trial of electric haulage, and if this is successful then the towing path could be removed, and the barges could be kept in the middle of the tunnel under the highest part of the arch, instead of as now over to one side, and a greater headway would be given."

One of the outcomes of federation has been the provision of a museum at Longton. Of course, the ideal for the enlarged borough of Stoke-on-Trent would be one great museum, gathering together the several ceramic collections into one splendid representative whole, but since that was not possible—for each town still desires the

retention of its institutions—it is only reasonable that a place of Longton's importance should have its ceramic museum. It was inaugurated some eighteen months ago, a portion of the reading room at the Sutherland Institute having been screened off, but within the last few weeks many examples of pottery have been added to it, including a fine loan collection from South Kensington. The latter comprises two cases of English, French, Italian, and Spanish porcelain, and a number of framed works, the latter being of exceptional interest, for they are paintings on china executed by students from pottery districts while studying in London about the year 1853. With them I will deal later. There are also in the museum six cases of English, Continental, and Oriental earthenware and porcelain, mostly of eighteenth century manufacture, which belong to the circulating collection that is being formed by the Stoke-on-Trent Corporation. All the purchases made since federation, and they are numerous and important, are assigned to this circulating collection, the object being to show them in turn at the five museums —Burslem, Hanley, Stoke, Tunstall, and Longton.

One of the most recent and important of the Corporation's acquisitions is on view at the Longton Museum. It comprises three ornate pieces of Minton porcelain, produced about 1878. All three have the well-known turquoise ground and finely painted panels, and are richly gilt. The centre piece is a reproduction of a famous Sèvres specimen, known as the ship vase, the original being in the royal collection at Windsor. The shape is unusual, and, as its description indicates, is in the form of a ship. Panels, surrounded by the turquoise ground, are painted with marine and flower subjects by Boullemier, after the originals by the famous Sèvres artist Morin. The other two pieces are oval vases with handles and plinths, and they are enriched with panels of figures painted by Carl Jenk, and of trophies painted by Leroy. Other examples belonging to the Corporation include black printed cream ware—specimens of the work done by Sadler & Green, of Liverpool, for Potteries manufacturers of the eighteenth century. There is also on view, having been lent by Mr. . Colclough, a monumental example of the Cauldon roducts. It is 4 ft. high, and is of an architectural haracter, its elaborate enrichments including modelled gures of Comedy, Tragedy, History, and Poetry. The iece was modelled by Mr. Schenck, formerly modelling aster at the Hanley School of Art.

The loan exhibit of painted china plaques, already entioned, came to Longton under circumstances that e interesting. Mr. A. J. Caddie (Chief Curator of the toke-on-Trent Museums) was at South Kensington selecting works for loan to the Potteries, when he discovered em in the Museum stores, where they had lain, dust-overed and unnoticed, for many years. They are the ork of students who, about the year 1853, had gone up London from Staffordshire and other pottery districts continue their studies at the National Art School, hich was then accommodated at Marlborough House nder the style of the Department of Practical Art. Two the students were Stoke men—Mr. George Gray, who his day was a well-known china painter, and Mr. Thomas llen, who for many years was the chief English painter figure subjects at Messrs. Mintons, and who now lives retirement at Stockton Brook. The plaques by George ray are a Titian head and a portrait of Princess Alice as infant, after Landseer. Both are remarkable in technique, and suggest in their strength of treatment oil painting rather than painting on china. A wonderfully fine arm tone had been secured in the rendering of the Titian picture. The best of the plaques by Mr. Allen is a copy of Reynolds' "Age of Innocence," in which the spirit of the original has been admirably preserved in fresh and glowing colour. The fine draughtsmanship which Mr. Allen's mature work displayed finds promise in this essay of his student days. A rather crude painting of a nude child from life is by Mr. W. J. Muckley, who for a time was headmaster of the old Burslem School of Design. He afterwards became principal of the Manchester School of Art, and later turned entirely to painting, his forte being the rendering of flower subjects. The other china paintings are by W. Ford, W. Hanks, Catherine Baines (who reproduced very effectively some Cuyp landscapes) and S. Lawton. Whether any of these hailed from the Potteries it has not been possible to trace.

The local art schools have commenced their session under the new curriculum, which, it is hoped, will have far-reaching advantages in bringing art instruction into touch with the manufactories. The difficulty in regard to the four art masters who were offered appointments as specialists, and who regarded the new positions as of lower status, is still under consideration. The new scheme is devised with a view to making the instruction given in the schools of art such as shall best be suited to the requirements of apprentices and employees engaged in the different branches of the potting industry, and in the other trades and professions of the district. For this purpose the instruction is arranged under different heads or courses as follow :—Pottery decorators and designers, tile draughtsmen and designers, pottery modellers and designers, pottery engravers, pottery lithographic artists and designers, pottery paintresses, architects, elementary school teachers, general art students and lithographic artists, house painters and decorators. The courses are divided into three grades—preliminary, advanced, and honours. A diploma is to be granted to those passing through the honours stage, but to obtain the diploma for pottery workers it will also be necessary to pass the grouped examinations of the Board of Education in industrial design, so that the diploma will be a real indication of the students' comprehensive study and capacity.

The Potteries schools of art have gained a number of awards in the recent National Competition of Schools of Art, though they are not so important or numerous as in some past years. Most of the awards are for ceramic designs. A silver medal has been obtained by Alfred H. Piper, of the Burslem School, for a tiled panel for the overmantel of a music room, and a similar award by Harold T. F. Smith, of the Hanley School, for a modelled design for figures, carried out in faïence, for the central portion of a lunette. A bronze medal has been won by Frederick Baker, of the Stoke School, for a cover-dish in cream ware. In addition, the Burslem School has won one national book prize, the Hanley School four, and the Stoke School one. A number of "commended" awards have also been secured.——The new Central School of Science and Technology is to be opened in January. It was hoped that the classes for the present session would have been commenced in the new building, but this has been found impossible. At a recent meeting of the Governors of the school it was reported that the Board of Education had notified their willingness to recognise the school as eligible for grants for the year 1913-14. The result of the recent pottery examinations was announced as follows :—Honours grade, 14 sat, 6 passed, one silver and one bronze medal awarded ; ordinary grade, 27 sat, 18 passed, one silver and two bronze medals awarded ; preliminary grade, 40 sat, and 39 passed.

The marriage took place on Sept. 9, at St. Michael's Parish Church, Stone, of Mr. Edmund Denis Leigh, youngest son of Mr. Edmund Leigh, J.P., of the Mansion House, Stone, and of the firm of Burgess & Leigh, manufacturers, Burslem, to Miss Christobel Frances Irwin, eldest daughter of Mr. Henry Irwin, J.P., C.C., of Granville, Stone. There was a large gathering of relatives and friends of the parties, who are widely known in the Stone and Potteries districts. The church had been florally decorated for the occasion, and the service was fully choral. The officiating clergy were the Rev. J. H. George (vicar of Chesterton, an old friend of the bride's parents), the Rev. C. P. Ford (rector of Stone), and the Rev. F. W. Walker. The bride was given away by her father and was attended by five maids. The bridegroom was accompanied by Mr. Leigh Holdcroft as best man. After the service Mr. and Mrs. Irwin held a reception at Granville, many guests attending, and later Mr. and Mrs. E. D. Leigh left for Switzerland and Italy.——On Sept. 3 the wedding was celebrated at the Wesleyan Church, Wolstanton, of Miss Emily A. Johnson, eldest daughter of Mr. S. Johnson, of the Hollies, Porthill, and manufacturer, of Burslem, to Mr. William Lawson, eldest son of Mr. W. Lawson, of Woolwich. Great local interest was manifested in the event, and the ceremony, which was performed by the Rev. W. B. Dalby and the Rev. J. Kewley, was attended by a large gathering of friends. The bride was given away by her father and was attended by her sister, Miss Florrie Johnson, and six children. Mr. C. Durward (London) was the best man. After a reception at the Hollies, Mr. and Mrs. Lawson left for the Isle of Wight.

A fire occurred on Sept. 6 at the Royal Crown Art Pottery, Cannon-street, Hanley. The fire brigade found a portion of the works adjoining an oven well ablaze and the roof falling in. The flames were soon under control, but considerable damage, which was all covered by insurance, was done to the property and stock. The origin of the outbreak was supposed to be heat from the oven. ——During the month three inquests have been held relative to the deaths of lead workers—one dipper and two glost placers. In the cases of the dipper and one of the glost placers, it was found by the juries that death resulted from natural causes. In the other instance, relating to the death of Samuel Newton, aged 66, of Goddard-street West, Longton, glost placer, Dr. Allan said the cause of death, in his opinion, was heart disease and cirrhosis of the lungs and kidneys. The condition of the latter was what might be found in the case of a person who had worked in lead for many years. Having regard to the man's age, the witness could not say that his employment had accelerated his death. The jury, however, returned a verdict to the effect that death was due to heart disease, and that it was accelerated by the man having worked in lead for many years.

THE CORNISH CHINA CLAY INDUSTRY.

(FROM OUR OWN CORRESPONDENT.)

IT must be gratifying indeed to all concerned in the important china clay industry of Mid-Cornwall to learn that there are indications of this great industrial struggle which has just entered the tenth week dwindling down, and that all the works will probably be restarted before the winter sets in. The inquiry by Sir George Askwith, the renowned peace-maker, on Aug. 29, had a salutary effect on the sober and more industrious worker, and from that time those who were coerced out, particularly in the Bugle area, expressed their desire to return to their respective works. Sir George's communication to Mr. Matt Giles, the principal representative to the workers' union, was as follows :—

"The employers state that they are not able to grant the present demands made upon them. They cannot afford to do so, with the present working hours of seven and in some cases seven and a half hours per day. They urge that wages paid for the labour employed and earnings made are the highest of any large industries in the West of England, and can also be most favourably compared with any work at all similar ; but they have established a committee, not for the purpose of negotiating on wages, nor of forming an association with that object, but with the intention of arranging uniformity among themselves to be observed generally throughout the district, and to be possibly based upon the hours system. This scheme must take some considerable time to arrange. It is emphatically stated that the proposed scheme will not imply in any event any reduction to any workman employed. Meantime all the works are open to men to resume work if they decide to do so."

It was quite evident from the foregoing communication that there was not the least justification for a continuance of the struggle, and adequate protection was immediately instituted in the Bugle area for the resumption of several works. The resisting section were greatly incensed at this, and on Monday, Sept. 2, Bugle became a veritable storm centre and several conflicts occurred between the strikers and police. Later on the pickets at the Great Beam China Clay Works were reinforced by a mob, who assumed a very threatening attitude. When the women pickets, accompanied by a feminine agitator, arrived on the scene, the crowd exceeded the methods of peaceful picketing, and after every warning had been exhausted a detachment of 20 Glamorgan Police came up, and a charge was made, the police wielding their batons right and left. Several strikers were slightly wounded, and Councillor Beard, of Birmingham, and also Mr. C. R. Vincent, the local organiser, did not escape punishment. It was not long ere Bugle assumed a peaceful aspect, although the police were in great force in case of emergency, and during the afternoon several wagon loads of clay passed through the village to the station. There was some booing at this at first, but other loads aroused no demonstration. During the day Colonel Hext, Chairman of the St. Austell bench of magistrates, and Mr. Alan P. Coode, clerk to the justices, arrived on the scene. In the evening Mr. Matt Giles, the chief organiser, addressed a vast crowd near the church, and remarked that they would demand an inquiry by the Home Office. This meeting terminated with the hymn "Lead, kindly Light," and the Benediction by the chairman, who urged the men to disperse quietly. On the following Wednesday Mr. Charles Duncan, M.P., general secretary of the Workers' Union, visited the district and made a very impressive appeal to another large assemblage in the Fair Park. He asked the masters to meet them and reason the thing out. His only desire was to effect a settlement acceptable to both sides. He urged the men to be peaceful, and intimated that he would not countenance violence on the part of the men at any price. By the end of another week the strike pursued a perfectly normal course, and despite the efforts of the pickets about 600 men stuck to their work. The ballot on the following Wednesday revealed a majority against resumption of 1,690 votes, but there were over 2,000 unaccounted for, whilst those in the Bugle area were not allowed to vote. At the evening meeting the feeling of the men was running high, and Mr. Matt Giles urged every man to be responsible for stopping clay going out of Bugle. The onus was upon them, and

he was certain that if they were determined they would have the assistance of the railwaymen and shippers at Fowey and Charlestown.

There was a renewal of hostilities on Sept. 11 at Charlestown, where the strikers, encouraged by the result of the ballot, made a determined effort to prevent the loading of 140 tons of clay at Charlestown docks. One of the organisers had addressed the men and said they had now decided upon a real fight and to stop the exportation of clay at Charlestown. The drivers and their loads were guarded by policemen, but at Mount Charles one of the many women sympathisers threw a bucket of water over a driver, whilst others were pelted with stones. The strikers attempted to block the road near Charlestown Docks, and became very aggressive despite all the passive means employed to restrain them. Finally, drawing their batons, the police charged the menacing crowd, and the strikers dispersed in all directions. A posse of the Glamorgan force were telephoned for, and quiet was soon restored.

The strike soon assumed its normal course again, and the only activity was apparently at Bugle, where out of 952 men usually employed 779 were working at the pits which had been restarted, and which have since increased to its full complement. On the 17th at the Meloder Works of North & Rose several men were employed in despatching clay by rail, and wagons were engaged the whole day under police protection. A band of strikers visited the works, but were very quiet.

Throughout the crisis several of the clay merchants have turned their hands to various pursuits on the works, some at engine-driving, in order to keep the water out, but the directors of the West Treviscoe tackled the despatch of a cargo of 150 tons of clay, and loaded 100 tons before they concluded their first day's work. A party of strikers were congregated in the roadway and viewed the scene with mingled feelings. On Sept. 22 fifteen other works were restarted. In the St. Stephen's area 163 men recommenced operations at the Higher, Lower, and South Goonvean China Clay Works, 81 in the Bugle extension area, and 156 in the St. Blazey district, and there are numerous applications for other works when protection can be provided.

The ballot undertaken by the Workers' Union had no effect whatever on the china clay merchants, and they have resolved under no circumstances to recognise the union. The committee have, as a natural sequence, discussed several phases of the dispute, but in accordance with their policy of silence which they have maintained throughout no details can be obtained.

Another sensation was provided on the 22nd, when a body of strikers created a disturbance near the Hallviggan China Clay Works, near St. Austell. When they were remonstrated with by the policeman on duty a revolver shot was fired under cover of darkness. The constable, who was struck in the hip, closed on his assailant, but in the scuffle only secured his mackintosh. This, however, supplied an important clue. The constable eventually collapsed, and the deputy chief constable, with the medical officer, were soon on the scene. Several altercations had taken place here between the police and the strikers, and on one occasion the police were obliged to use their batons. During the same night a lad named Howard Vincent, who resided with his brother at Goonamarth, in the same parish, was arrested and charged on the following morning at the St. Austell Police Court. After the police inspector had given his evidence the accused was asked by the presiding magistrate, Colonel Hext, whether he had anything to say, but the accused only affirmed the inspector's evidence, remarking that it was a fair description of the incident. Vincent was subsequently remanded until next week for the recovery of the constable. Dr. Panting, of the Royal Cornwall Infirmary at Truro, visited Constable Collett at his residence with the X-rays apparatus with the object of locating the bullet, and it was found to be deeply embedded in the hip. Up to the time of despatch the leaders are displaying their weakness in many ways. They are now excluding reporters from their demonstrations.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

BY the present time of writing, the coast and country season for these trades may be regarded as very nearly at an end, although there will still be some little show up to the end of the month, and even over the first half of October, should the weather prove fine. Reports from retailers at these resorts are fairly good, notwithstanding that the season was late in really beginning, owing to a very marked instance of "winter lingering in the lap of May," and even of June and July. The weather from early in July up to well on towards the end of September, made up for the retardation, and during the second half of July and the first half of August, our traders put through a good deal of business, owing to the crowded condition of all summer resorts. China goods and whiteware did very well, but, as regards the temporary boom, glass and crystal wares were most particularly in evidence, very good repeat orders being placed in that department. The retail houses of the cities and towns have been having rather a quiet time during September, for, although early in the month the weather was still fair and good for shopping, something like a cold snap intervened just before the middle of the month, and the effect of this has been rather unfavourable. There has been rain at times, but, on the whole, not enough for the needs of the cereal crops of Scotland, which, in consequence, are turning out on the light side. This circumstance, later, will be found to have an unfavourable effect upon the china, earthenware, and glass trades in the rural districts, and especially those that are wholly inland, the agriculturists there, with no help from the fishing of the coasts as a make-weight against the lightness of the cereal returns. The herring fishing over, the northern waters of Scotland, which began very badly, took a better turn later on, as was noted in our report for September; and by this time it is seen that the season as a whole is not so very bad after all. White fishing operations have likewise varied in fortune, and, of late, the takes (by the trawlers and others) have been notably short, but the total will work out reasonably, and our trades, through the winter, should not suffer much from this special cause.

Reports from the wholesale merchants and their travellers indicate but very moderate orders during September, but something better may result from their exertions throughout the new month of October. It is noted that now there is very little of any complaint as regards getting new orders quickly executed at the potteries. If any such is met with at all, it usually refers to glass ware and particularly on bottles, the call for which has been very good over a considerable period of time.

Early in September the potteries of Kirkcaldy and district had some threat of interruption to production. The glost-kilnmen, under the new statutory regulations, found themselves at a disadvantage in their piece-work reckonings; the week's working hours were compulsorily reduced to 48, with a corresponding decrease in the weekly

earnings, and they found that they were not going to be able to pay their female dippers 10s. per week as heretofore. A concerted movement began for the purpose of reducing the weekly pay of the dippers, but this was strongly resented by the latter, who took their case before the masters, intimating that they would stop if attempts were persisted in to reduce the 10s. in any degree at all. Following this action, two of the masters consented to allow their glost-kilnmen an additional 2s. per kiln per week in order that they might be enabled to maintain the wages of the dippers.

The Gazette.

Dissolutions of Partnership.

NOTE.—*When two dates are given in the following announcements the first is the date of the dissolution. The date in parentheses is that of the official advertisement.*

ALEXANDRA POTTERY Co. (Edmund William Wangler, Melville Wilfred Wangler, and Walter Edmund Wangler), the Alexandra Pottery, Corporation-rd., Newport (Mon.), pottery and earthenware manufacturers. Aug. 26. (Sept. 12.)

PREMIER BOTTLE SYNDICATE (Stephen Frank Stackard and Albert Philippoteaux), 46a, Wilmer-gardens, Haggerston, and Bridge-house, 181, Queen Victoria-st., E.C., manufacturers of bottles and glass articles and dealers in glass ware. Aug. 13. All debts and liabilities due to and owing by the said late firm will be received and paid by the said Albert Philippoteaux, of 46a, Wilmer-gardens, and Bridge-house, 181, Queen Victoria-st., E.C. (Sept. 12.)

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

AUTOMATIC GLASS BLOWING PATENTS SYNDICATE, LTD., Birmingham. T. M. Attlee ceased to act as receiver. April 14.

PITFOUR BRICK & TILE Co., LTD. Claims to C. M'Nicoll and A. G. Gilmour, joint liqrs., at 25, George-st., Perth, by Oct. 1.

Voluntary Liquidation.

RICHARDSON J. D. & Co., LTD., Newcastle-on-Tyne. Statement of affairs, Aug. 9. Liabilities :—Secured creditor, banker's claim £1,697 13s. 5d., less secured on personal guarantees of directors, £700; due by the company, £997 13s. 5d. (secured by mortgage on leasehold factory and fixed plant. Should the security not realise this sum, then the bank will rank as an unsecured creditor for any balance). Preferential creditors for rent, rates and telephone, deducted contra, £41 13s. 9d. Unsecured creditors, £832 19s. Assets :—Cash at banker's, £62 10s. 8d.; cash in hand, £1 4s.; stock-in-trade, loose plant and office furniture, £170; book debts, good £643 0s. 9d., doubtful and bad (£188 11s. 6d.) £46 11s. 4d.; cases in hands of customers, estimated, £100; deduct preferential creditors per contra, £41 13s. 9d.; total, £981 13s. Subject to a charge of: First mortgage debentures, £1,400; second mortgage debentures, £200.

Notices under Assignments, &c.

KEEP FRANK ALLDEN, 58, Park-hill, Moseley, and CHARLES JUXON, 59, Oxford-rd., Acock's-green, Birmingham, trading as F. A. Keep, Juxon & Co., Barn-st., Birmingham, tank manufacturers. Claims to John William Hinks and Charles Thomas Appleby, 26, Corporation-st., Birmingham.

SHUFFLEBOTTOM WILLIAM, Royal Crown Pottery, Cannon-st., and 87, Lichfield-st., both Hanley, earthenware manufacturer. Claims to Charles E. Bullock, Albion-st., Hanley.

Notices of Dividends.

GODWIN WILLIAM HENRY, The Ferns, Lugwardine, and AUSTIN FRANCIS GODWIN, Goode Rest, Lugwardine, trading as William Godwin & Son, Lugwardine Works, Withington, encaustic tile manufacturers. Supplemental $\frac{145}{168}$ per cent. interest, at trustee's office, 39, Broad-st., Hereford.

WILSHAW HARRY, 35, Alcester-st., Redditch, china, &c., dealer. First and final, 1s. 8½d., at O.R.'s, 191, Corporation-st., Birmingham.

Orders made on Applications for Discharge.

GIBSON ANDREW, Ropley, Bowes-rd., late 1, Woodland-rd., New Southgate, glass merchant. July 11. Bankrupt discharged subject to his consenting to judgment for £10, being part of the balance of the debts provable in the bankruptcy which is not satisfied at the date of this order, and £1 10s. costs of judgment.

WARDLE FREDERICK CHARLES (lately trading as The Potteries Accountancy Co.), china manufacturer, &c., 12, Arundel-rd., Oswestry, Salop, late Stoke-on-Trent, and Longton, lately trading in co-partnership with Henry Boulton, Alfred Gibson, and Margaret Ann Wardle, under the style of Boulton & Co. This debtor applied at the County-buildings, Wrexham, on Sept. 17 for his discharge from bankruptcy. The Official Receiver reported that a first and final dividend of 11d. in the £1 had been paid on proofs for £95 odd. It appeared that the debtor's wife had an income of £175 a year. She died in 1912, and the trustees of the will purchased claims against the debtor to the extent of £576, being practically the whole of the debtor's debts with the exception of £35, and a debt due to Mr. W. T. Jones (the trustee for the wife), who held certain securities. The price paid for them was 6s. 8d. in the £1. On behalf of the debtor, Mr. Hopley Pierce said there were only two creditors on the files—the trustees. He (Mr. Pierce) was prepared to hand over £120, which would be equal to 10s. in the £1, on behalf of the debtor, and on this undertaking his Honour Judge Moss granted the discharge.

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with Creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

** These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

(The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.—EDS. P.G.)

ARVON BRICK AND TILE Co., LTD. (by, &c.), Peblig Brick Works, Llanbeblig, and the Dolyfelin Secont Brick Works, Carnarvon, brick makers. Appointment of Thomas Jones, Bryn Afon, Carnarvon, retired coal merchant, as receiver and manager by holders of certain debentures of the company, to realise the business by sale, which he carried out by selling the same on Aug. 29, 1913, for the sum of £3,150; the company appointing him trustee on behalf of the creditors to distribute same pro rata amongst the creditors after payment of principal, interest, and costs, &c., in respect of the said debentures. Dated, Sept. 4. Filed, Sept. 9. Liabilities unsecured, £2,000. Property after deducting secured claims, £,2000. The following are creditors :—C. Whittaker & Co., Ltd., Accrington, £5; Edward Hughes & Co., Carnarvon, £13; Edward Hughes & Son, Carnarvon, £18; Humphrey Owen & Son, Carnarvon, £11; John Jones, Carnarvon, £4; W. M.

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2 GRANDS PRIX—PARIS, 1900. | 2 GRANDS PRIX—ST. LOUIS, 1904.
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LES ÉSTABLISSEMENTS POULENC FRÈRES, MANUFACTURING CHEMISTS, 92, RUE VIEILLE DU TEMPLE, PARIS.

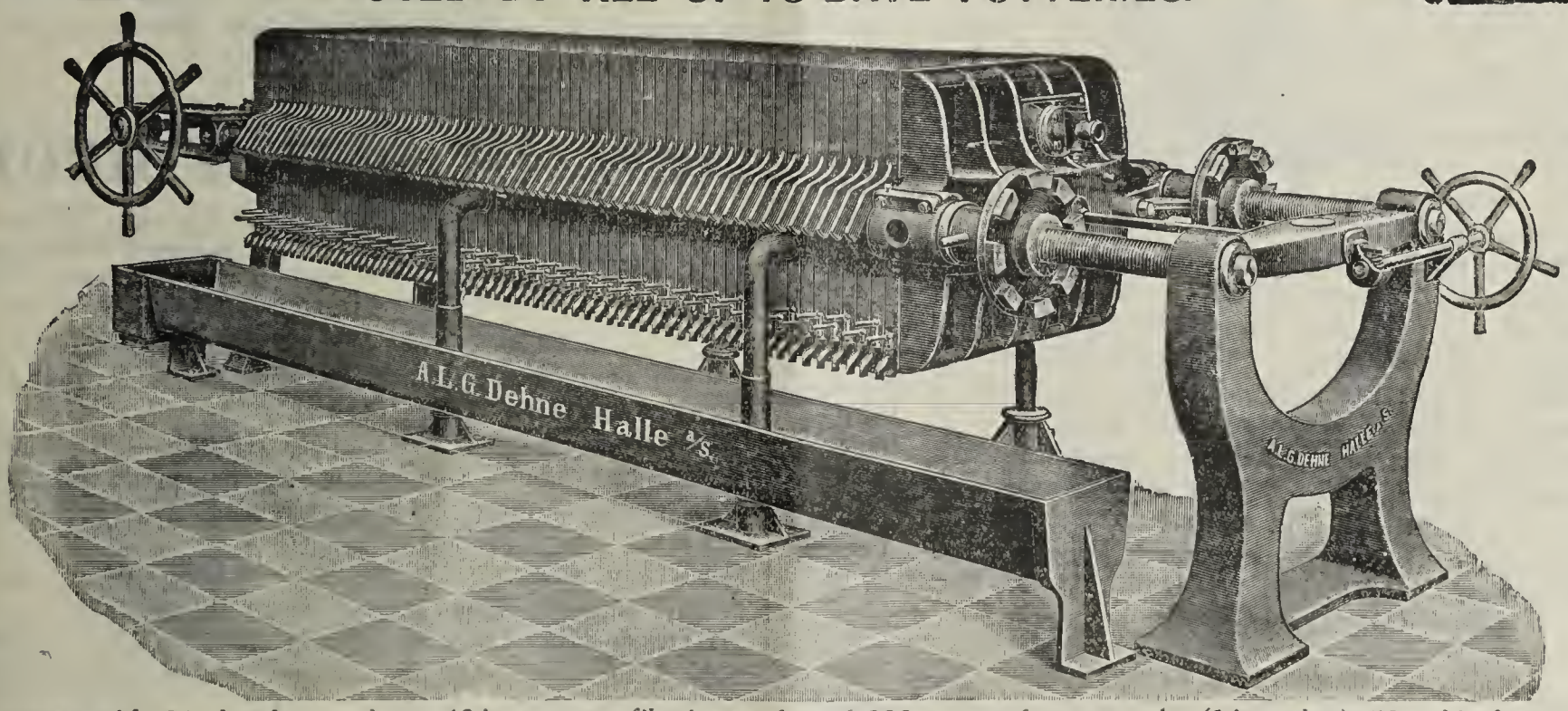
Agent for England : JOS. FLACH, 16, Water Lane, Great Tower Street, LONDON, E.C.
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H

Roberts, Carnarvon, £12 ; Owen Evans & Son, Carnarvon, £50 ; Peter Hughes, Carnarvon, £26 ; E. Lloyd Williams, Carnarvon, £3 ; Lake & Co., Ltd., Carnarvon, £44 ; Walter Whittles, Carnarvon, £4 ; Owen Owens, Chevilog, £8 ; Aston Hall Coal Co., Hawarden, £23 ; E. Pierce, Holywell, £164 ; F. Llewellyn Jones, Mold, £7 ; Thomas Parry & Co., Mold, £33 ; Mold Collierics. Ltd., Mold, £132 ; Samuel Rogers, Wrexham, £173 ; Carnarvon Corporation, £17 ; Maria Thomas (trustees of), £550 ; John Owen (on acceptances), £800 ; John Williams & Son (on acceptances), £120 ; Rhys Williams (on acceptances), £69.

Carr Jane Elizabeth, 37 and 87a, Coatsworth-rd., Gateshead, glass and ehina dealer. Dated, Sept. 6. Filed, Sept. 11. Liabilities unsecured, £547. Property after deducting secured elaims, £80. Tr., George H. Middleton, 13, Grainger-st., West Newcastle-on-Tyne. Sccured ereditors, £510. The following are ereditors :— Samuel Grey, Birmingham, £14 ; King & Barrett, Burslem, £6 ; James Sadler & Sons, Ltd., Burslem, £25 ; Mrs. Howard, Canterbury, £40 ; G. & A. Carr, Cardiff, £20 ; Myott, Son & Co., Cobridge, £11 ; Gcorge Ellis, Gateshead, £6 ; Dr. Hindmarsh, Gateshead, £40 ; Mrs. Watkins, Gateshead, £10 ; Robert Heron & Son, Kirkcaldy, £17 ; Raven & Hitcham, Kirkcaldy, £3 ; Else & Co., Ltd., Liverpool, £4 ; Clough & Lester, Longton, £8 ; T. Halse, Longton, £24 ; A. B. Jones & Sons, Longton, £11 ; Thomas Walters, Longton, £18 ; J. N. Burluraux, Neweastle-on-Tyne, £13 ; Greenwood, Punter & Co., Neweastle-on-Tyne, £7 ; Miss Higgins, Newcastle-on-Tyne, £50 ; Hugh Lindsay, Newcastle-on-Tyne, £16 ; J. Myers, Newcastle-on-Tyne, £38 ; G. Mitcheson, Newcastle-on-Tyne, £16 ; Brushes, Ltd., Oldham, £4 ; R. Lloyd & Sons, Stoke-on-Trent, £4 ; Grimwades, Ltd., Stoke-on-Trent, £12 ; A. G. A. Jones, Stoke-on-Trent, £3 ; Ball Bros., Sunderland, £13 ; Rathbone & Co., Tunstall, £18 ; banker's elaim, £37. Preferential ereditors : A. V. Robinson, Gateshead, £20 ; Corporation of Gateshead, Gateshead, £10 ; Warner & Beswick, Hanley, £8.

Hysel Charles Alexander, 9, Boldmere-rd., Wyldgreen, ironmonger and china merchant. Dated, Sept. 8. Filed, Sept. 11. Liabilities unsecured, £152. Property after deducting secured elaims, £178. Tr. Albert E. Sherry, 131, Edmund-st., Birmingham.

Phillips Annie, 155, Humberstone-rd., Leieester, china dealer (wife of Arthur Phillips). Dated Aug. 30. Filed, Sept. 4. Liabilities unsecured, £329. Property after deducting seeured elaims, £96. Tr. John W. Morris, 25, Belgrave-gate, Leicester, china dealer. The following are ereditors :—Jules Lang & Son, London, £16 ; Max Emanuel & Co., London, £15 ; H. Bates, London, £11 ; H. M. Cooke, Birmingham, £3 ; W. Kent, Burslem, £8 ; S. Johnson, Burslem, £13 ; H. Hulme & Sons, Burslem, £18 ; Barker Pottery Co., Chesterfield, £11 ; Rubian Art Pottery Co., Fenton, £21 ; Harley Jones, Fenton, £13 ; Emery Bros., Fenton, £20 ; Doleman, Steward & Grieve, Glasgow, £5 ; Johnson Bros., Ltd., Hanley, £6 ; Diamond Pottery Co., Hanley, £17 ; C. Bassford, Leicester, £7 ; E. Phillips, Leieester, £16 ; J. W. Morris, Leicester, £20 ; Thomas Poole, Longton, £12 ; Mayer & Sherratt, Longton, £15 ; Royal Art Pottery Co., Longton, £4 ; St. Louis Pottery Co., Longton, £10 ; A. Brookfield, Longton, £12 ; Thomas Rathbone, Tunstall, £7 ; A. Meakins, Ltd., Tunstall, £16 ; W. Adams & Co., Tunstall, £22.

Bankruptcy Proceedings.

Hemmings William Henry, Drayton-st., Wolverhampton, Stafford, and the Market-hall, Brierley-Hill, Stafford, wholesale china and earthenware merchant. The following are ereditors :—W. B. Allen, Broseley, Salop, £26 ; Anglo-Belge Glass Association, Ltd., London, £16 ; Barkers & Kent, Ltd., Fenton, £40 ; J. W. Beswick, Longton, £13 ; Bridgett & Bates, Longton, £24 ; Cartwright & Edwards, Longton, £123 ; Davidson & Co., Gateshead-on-Tyne, £12 ; Dornberger & Co., London, £19 ; E. Enderlein, London, £18 ; Max Emmanuel & Co., London, £27 ; Emery Bros., Fenton, £63 ; Faudels, Ltd., London, £32 ; R. Floyd & Sons, Stoke-on-Trent, £83 ; Gater, Hall & Co., Burslem, £23 ; Greener & Co., Sunderland, £18 ; G. Greiner & Co., London, £23 ; W. H. Grindley & Co., Tunstall, £18 ; M. & J. Guggenheim, London, £29 ; S. Hancock & Sons, Stoke-on-Trent, £31 ; S. Johnson, Ltd., Burslem, £17 ; Jas. Kent, Fenton, £10 ; King & Barrett, Burslem, £46 ; Kirkland & Co., Stoke-on-Trent, £18 ; Jonas Lang & Co., London, £16 ; J. May & Co., London, £15 ; Mann & Porzelius, Germany, £11 ; Mayer & Sherratt, Longton, £33 ; G. Mellor & Co., Stoke-on-Trent, £16 ; Midland Railway Co., Derby, £12 ; Mynott, Son & Co., Trowbridge, £12 ; New Hall Pottery Co., Ltd., Hanley, £35 ; Rateliffe & Co., Longton, £20 ; Rubian Art Pottery, Ltd., Fenton, £77 ; St. Louis Fine Art Potttery Co., Longton, £20 ; Star China Co., Ltd., Longton, £51 ; J. Tams, Ltd., Longton, £16 ; J. Unwin & Co., Longton, £15 ; Wachtel & Voight, Dresden, £18 ; J. T. Warren, Hanley, £41 ; C. Wainc & Co., Ltd., Longton, £25 ; G. Warrilow & Sons, Longton, £34 ; A. J. Wilkinson, Ltd., Burslem, £37; Wild Bros., Longton, £44 ; Wild & Adams, Longton, £44 ; T. C. Wild, Longton, £29 ; Burtles, Tate & Co., Manchester, £6 ; H. J. Colclough, Longton, £8 ; C. J. Dams & Co., London, £5 ; Grimwades, Ltd., Stoke-on-Trent, £10 ; Hayden & Co., London, £5 ; L. & N. W. Railway Co., Wolverhampton, £6 ; G. Pistor, London, £11 ; Randall Bros., Birmingham, £8 ; Seiber & Markgraf, Bohemia, £11 ; Warrington Pottery Co., Ltd., Stoke-on-Trent, £7 ; Weiss & Biheller, London, £9.

Lisemore, Fred Henry, 31, Norman-st., Leicester, china dealer. This debtor attended at the Castle, Leicester, on Sept. 12 for his public examination, on accounts showing liabilities amounting to £142, and assets estimated to produce £11. It appeared that the debtor eommenced business in 1900, and had sold ehina and similar goods at local markets. He was without capital and failed in 1903, afterwards trading in his wife's name. In 1908 the executed a dced of assignment. Debtor subsequently went into partnership with a man named Pepper, after which he earried on business alone. Trade had been bad on account of adverse weather, the railway strike, coal strike, &e. The ease was concluded.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

Corrugated Roof Tiles, No. 18,614.—A. Kuhn. Corrugated roof tiles. Aug. 15, 1913.

Decorating Earthenware, No. 18,945.—Ch. Bonifas & Co. Process for decorating articles made of earthenware and the like. (Con. date Aug. 27, 1912, Switzerland.) Aug. 20, 1913.

Imitation Stained Glass, No. 19,398.—W. Grossheim. Imitation of stained glass. Aug. 27, 1913.

Machine for Coating Earthenware, No. 18,533.—H. W. Horne. Automatie machine for coating earthenware with glaze. Aug. 15, 1913.

Ovens and Driers for Tiles, Pottery, &c., No. 18,821.—C. Dressler. Ovens and driers suitable for use in the manufacture of tiles, bricks, pottery, and analogous ware for annealing and for other purposes. Aug. 19, 1913.

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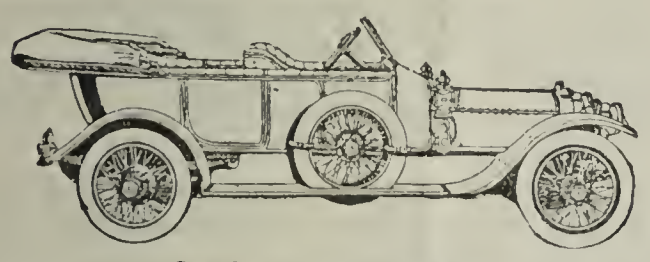
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HEAD OFFICES AND SHOWROOMS:

LAMBETH, LONDON, S.E.

PRODUCING BEADS ON GLASS RODS, No. 19,316.—J. Kremenezky (firm of). Machines for producing beads on glass rods. (Con. date Feb. 19, 1913, Austria.) Aug. 25, 1913.

TREATMENT OF CLAYS, No. 19,902.—P. J. Bristow and J. G. Bristow. Treatment of clays and obtaining valuable products therefrom. Sept. 3, 1913.

Specifications Published.

1912.

17,827.—Gibbs. Decoration of glass and glassware.
20,523.—Armytage & Dawson. Glass-blowing machines for making bottles and the like.
25,904.—Torrance. Poison bottles.
21,039.—Tanner & Biggleston. Drying kilns and the like.
4,337.—Bevington. Kilns or ovens for firing earthenware, china and the like articles.
19,074.—Predragovic & Speiser. Building bricks or blocks.
24,536.—Fleming. Manufacture of glass bottles and like articles.
29,266.—Gilliot et Cie. Mosaic slabs, plates, or the like.

1913.

13,621.—Gibbs. Decoration of glass and glassware.
2,899.—Cervenka. Appliance for cutting glass articles of tubular, cylindrical, or similar form.
9,215.—Bergius. Bottles.
11,837.—Fritsch. Manufacture of glass articles.
3,409.—Marks. (Badische Machinenfabrik & Eisengiesserei vorm G. Sebold und Sebold & Neff.) Sand blast apparatus.
6,256.—Sperni & Bond. Tiles, slabs and the like for roofing and other constructive purposes.
9,666.—Bardin. Process for the manufacture of reinforced glass.

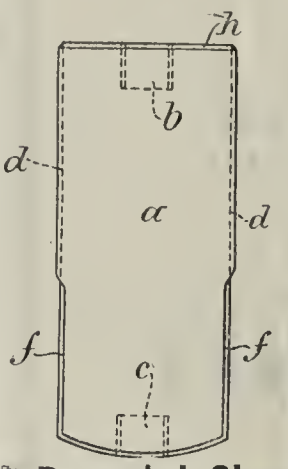
Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

621,328-9.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.
620,521.—G. Helps, Izons Croft, Ansley, Atherstone.
621,566.—O. Baumbach, Bridge-st., Chorlton-on-Medlock, Manchester.
621,976.—R. F. Paterson, National Bank-bldg, Paisley.
622,205.—N. Booth, 17, Coleridge-rd., N.
622,206.—N. Booth, jun., 21, High-rd., N.
622,631.—H. E. Clerk, 2, Bothwell-st., W.
622,662.—J. Maddock & Sons, Ltd., Burslem.
622,663.—Glassworks Josef Inwald A.G., 69, Farringdon-rd, E.C.
622,733.—Crown Staffordshire Porcelain Co., Ltd., Fenton.
622,734.—Richardson & Co., 12, Nelson-st., Manchester.
623,137.—P. Waldman, 249, Old-st., E.C.
623,209.—W. T. Copeland & Sons, Stoke-on-Trent.
623,291-2, 623,528.—Allertons, Ltd., Park Works, Longton.
623,293.—The Art Pottery Co., Waterloo-st., Longton.
623,302.—G. J. Chambers, 40, Home Park-rd., Wimbledon Park, and G. W. Cheavin, 25, Dryburgh-rd., Putney.
623,438.—M. Emanuel & Co., 41-42, Shoe-lane, E.C.
623,613, 623,806.—The International Bottle Co., 108, Fenchurch-st., E.C.
623,615-6.—The British and Foreign Bottle Co., 107, Cannon-st., E.C.
622,064, 622,478.—Grimwades, Ltd., Stoke-on-Trent.
622,806-7.—W. H. Grindley & Co., Woodland Pottery, Tunstall.
621,321.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.
622,405.—J. K. King, 51, Mount Gold-rd., Plymouth.
622,554.—Clementson Bros., Ltd., Hanley.
623,909.—J. Marx, 20, Finsbury-circus, E.C.
623,968.—Johnson & Jorgensen, Ltd., 26-27, Farringdon-st., E.C.
624,025.—Hukin & Heath, Ltd., 19, Charterhouse-st., E.C.
624,044.—Down Bros, Ltd., 21 & 23, St. Thomas's-st., E.C.
624,131, 624,327.—James Green & Nephew, Ltd., 107, Queen Victoria-st., E.C.

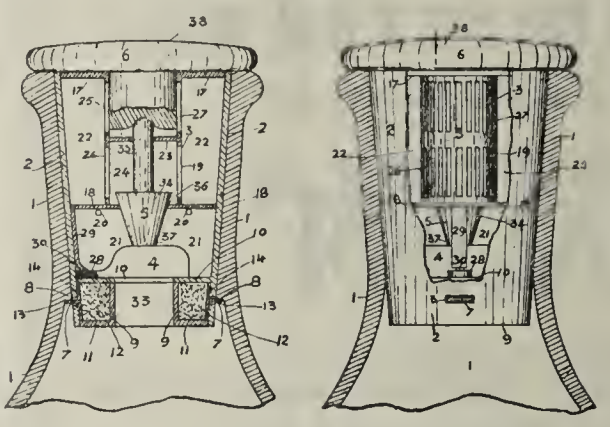
LATEST COMPLETE SPECIFICATIONS.

Roofing Tiles.—F. Kandler, of Schloss Lannach, Steiermark, Austria, claims :—(1) In roofing tiles having upon the underside an undercut or outwardly bevelled nose, and inwardly bevelled side edges, for the purpose of locking each tile with two adjacent lower tiles, arranging the locking nose at the lower end of the tile, and inwardly bevelling the upper parts of the side edges for about two-thirds of the tile-length. (2) In a roofing tile of the character referred to in the preceding claiming clause, outwardly bevelling the lower parts of the side edges of the tile.



Decorated Glassware.—F. I. Gibbs, of 140, Hurst-st., Birmingham, claims :—Glass or glassware which is first manufactured with a raised or incised pattern or design on one side or face thereof, and with a plain surface at the back, and afterwards coloured or partly coloured by applying to and burning in the said plain back surface a colour or colours in such a manner that the latter is or are incorporated with and forms or form part of the glass surface, the said coloured portion or portions having clearly defined edges corresponding with the design or portion of the design on the front face of the glass.

Non-refillable Bottles.—J. T. Hartnett, of 2, St. Catherine's terrace, Niton Undercliff, Isle of Wight, claims :—(1) Means of the non-refillable order for bottles and the like, comprising a pair of tubular members, one situated within the other, and so constructed that end and transverse compartments are obtained between them ; a partition dividing the inner member into two compartments communicating with each other and with the transverse compartment of the members by openings in the inner member ; a valve situated in the end compartment of the members to control the communication between same and the bottle or the like, and another valve located between the said end compartment and the contiguous compartment of the inner member to govern the communication between the end and transverse compartments of the members established through the agency of some of the openings in the inner member. (2) Means of the non-refillable order for bottles and the like, comprising a tubular member to fit the neck of the bottle or the like ; another tubular member inserted within said member, and of such relative dimensions that two compartments are obtained between them ; a partition dividing said inner tubular member into two compartments ; a flap valve situated in one of the compartments formed between the said members ; a sliding valve disposed in one compartment of the inner member, and a stopper or cork arranged in the other compartment of the inner member.



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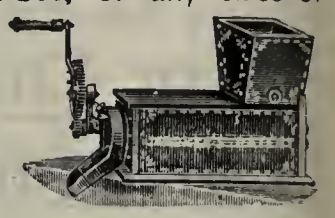
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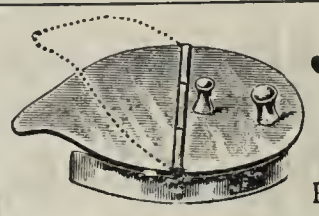
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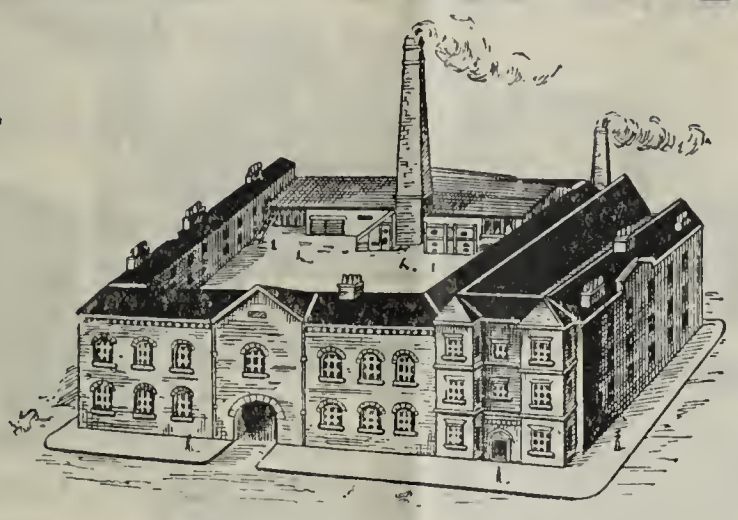
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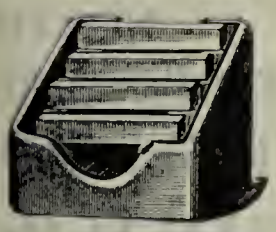
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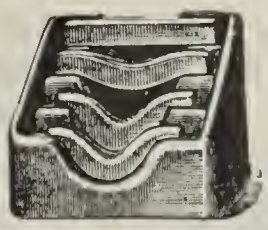
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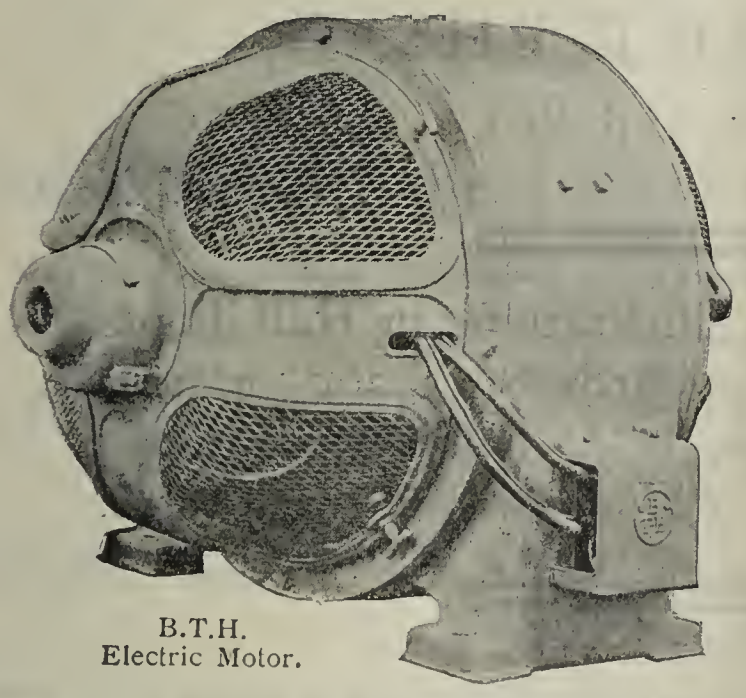
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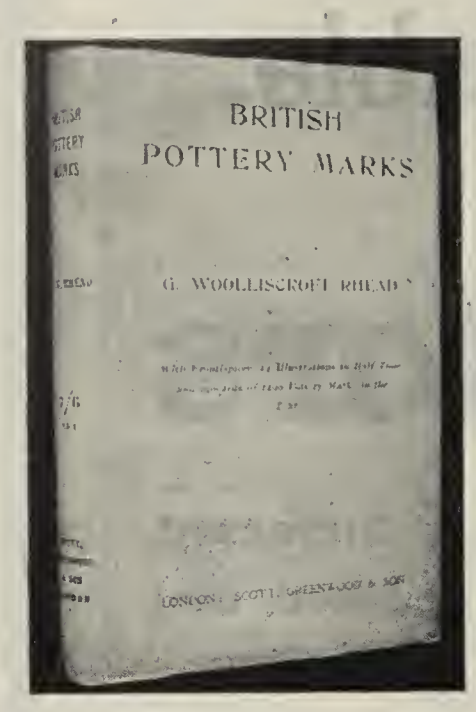
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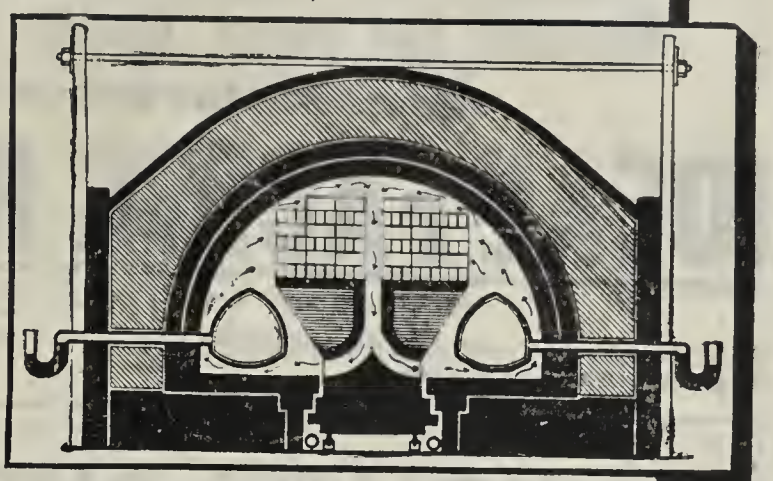
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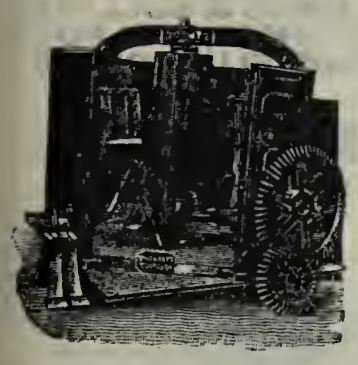
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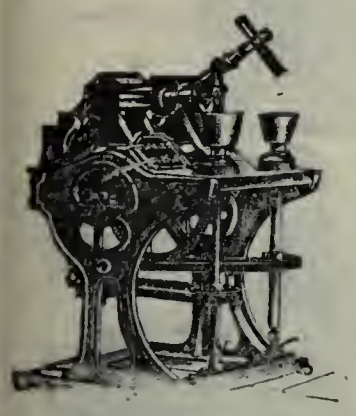
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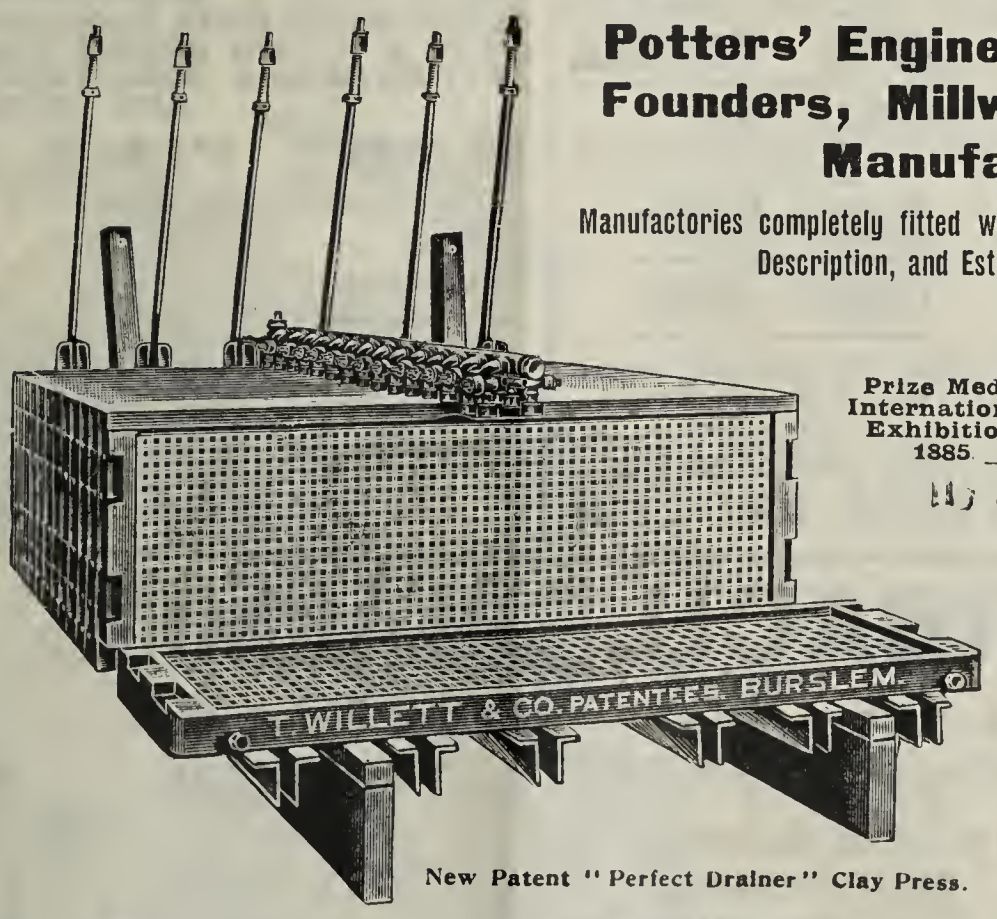
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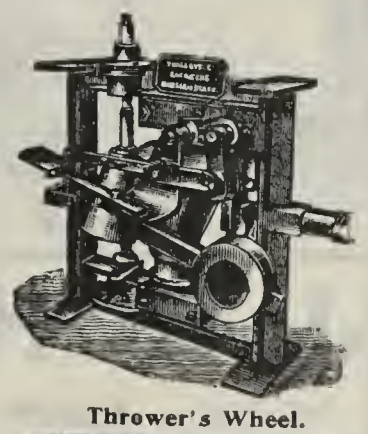


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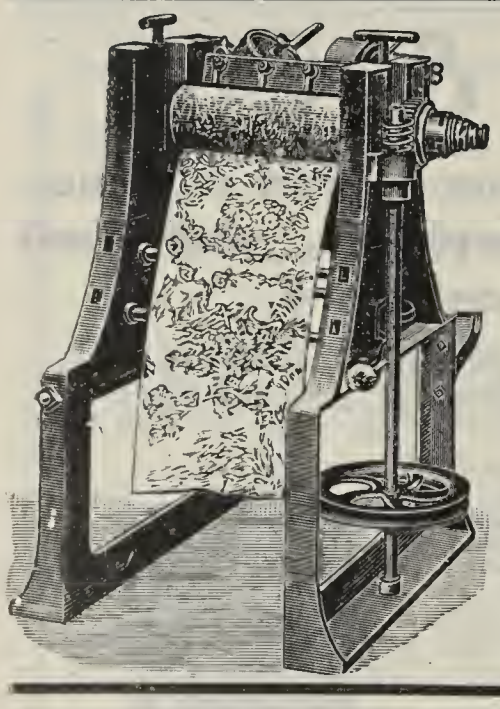
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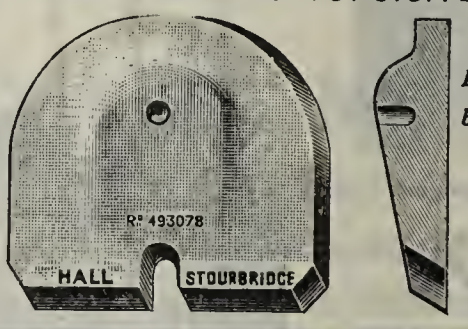
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Thickness being increased around the lifting hole render these less liable to break in removing.

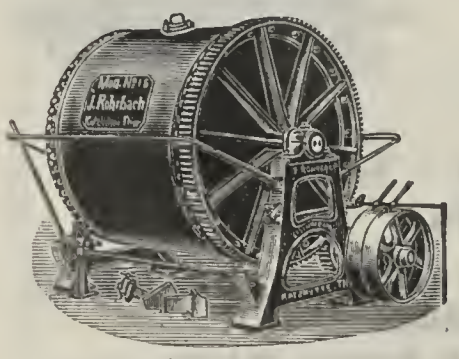


Bottom Edge being bevelled instead o flat prevents adhesion to the Pot or Metal.

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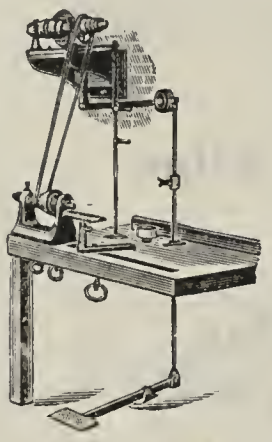
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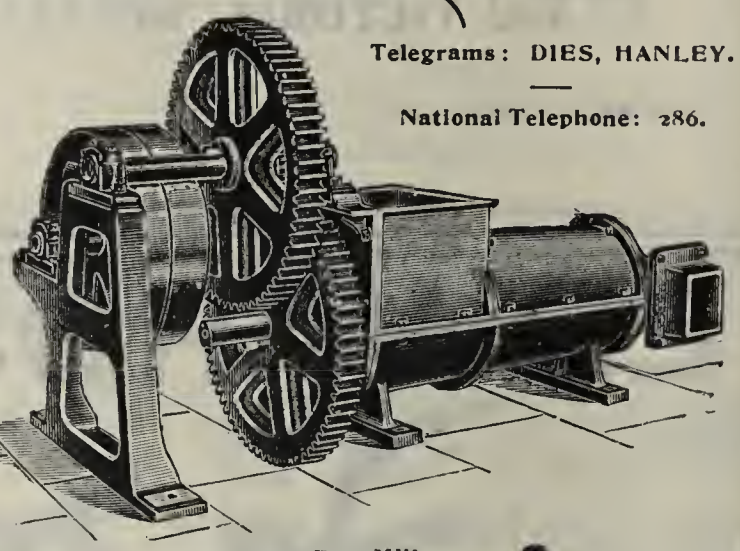
Atlas Foundry, HANLEY, Staffs., ENGLAND,

POTTERS & TILE (PLAIN AND ENCAUSTIC) MANUFACTURERS' ENGINEERS

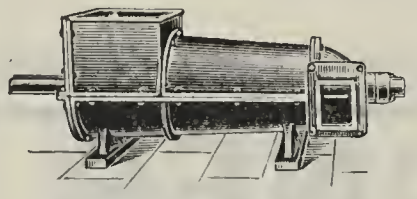
Telegrams: DIES, HANLEY.

National Telephone: 286.

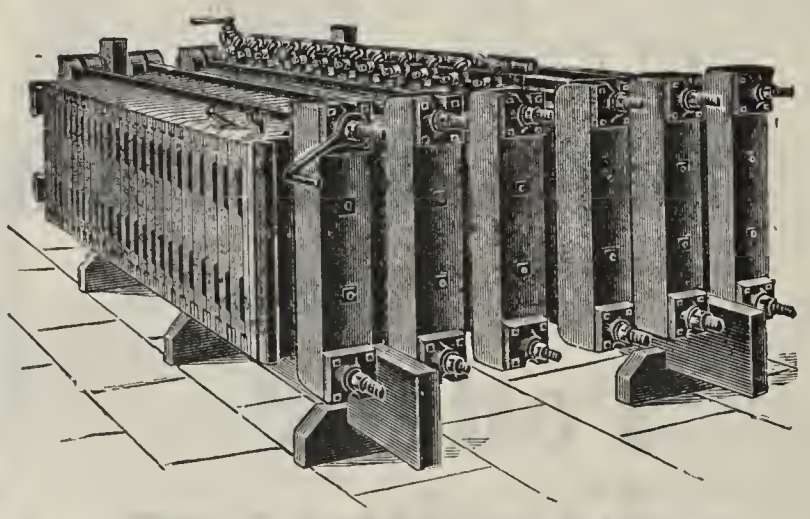
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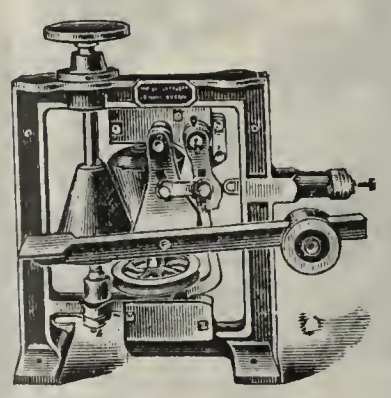
Pug Mill (with Gearing).



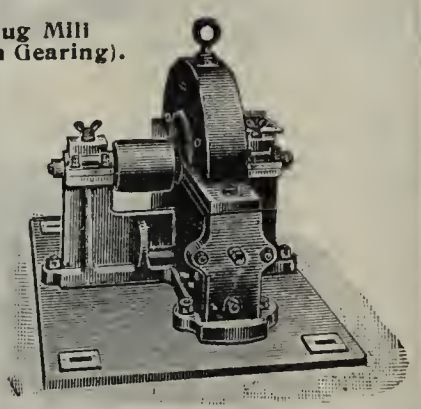
Pug Mill (without Gearing).



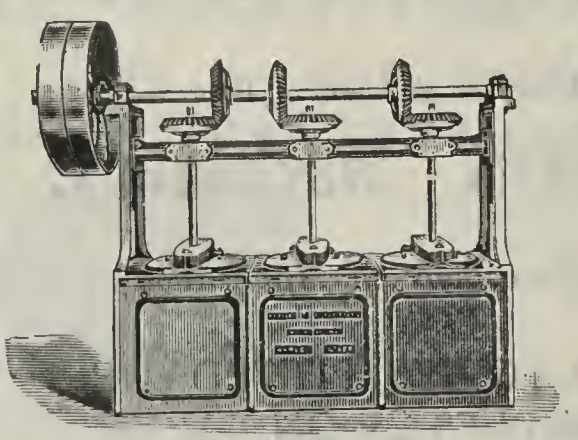
Filter Press.



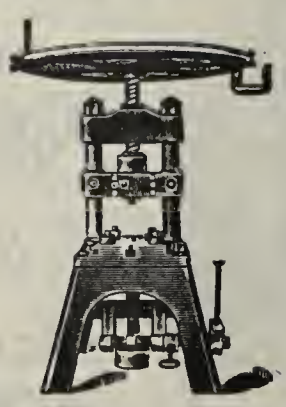
Throwing Wheel.



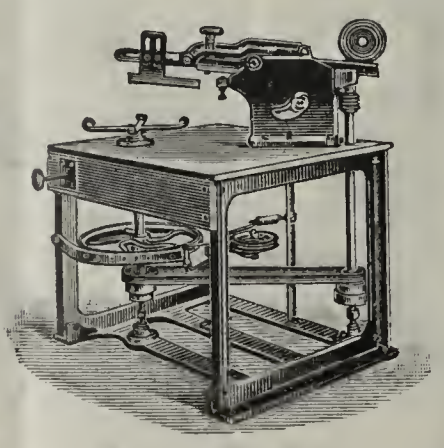
Damped Clay Disintegrator or Dust Mill.



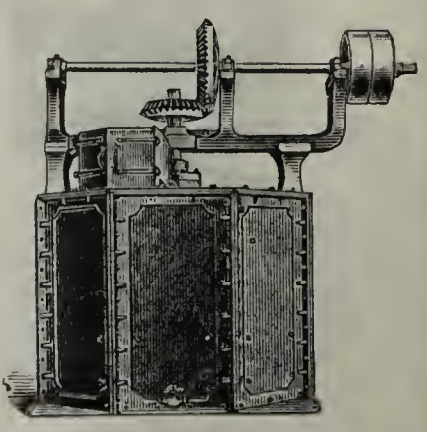
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FOR LITERARY CONTENTS SEE PAGE 1247. INDEX TO ADVERTISERS, PAGES 1226 and 1228.
All Advertisement alterations for the December Issue must reach us by November 22.

All announcements for this Heading for December issue must reach us by first post on November 27th.

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(CONTINUED ON PAGE 1216.)

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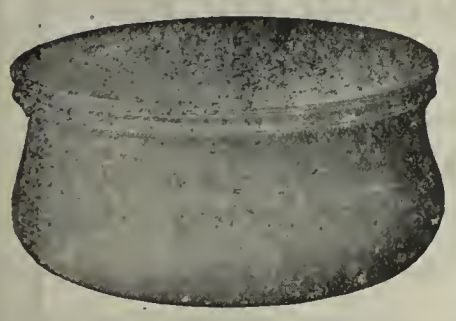
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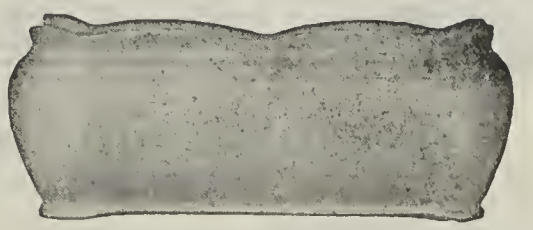
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continued from page 1214.

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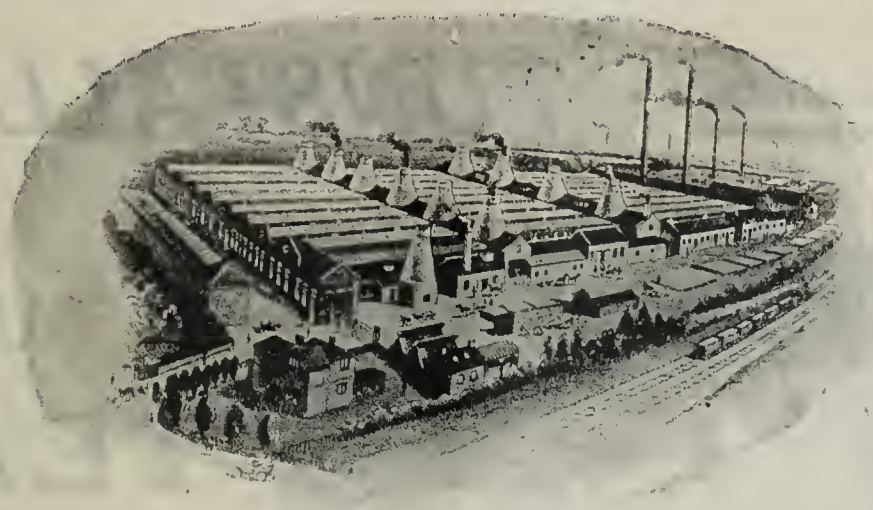
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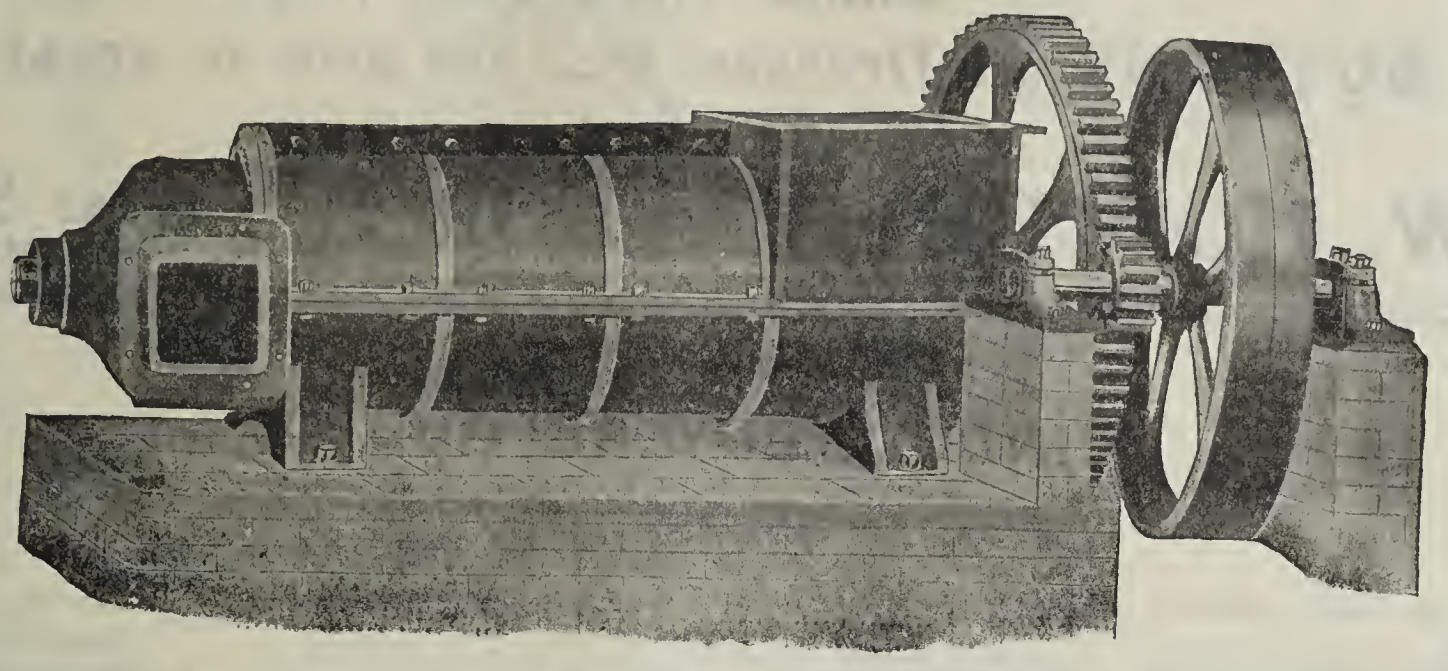
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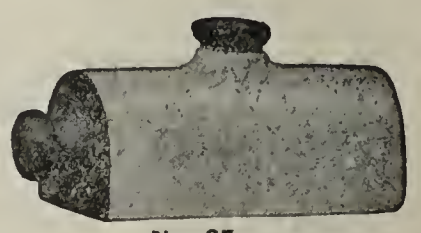
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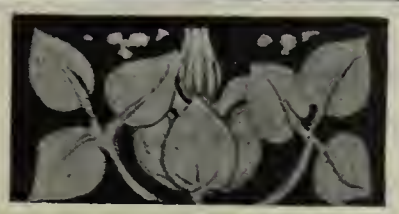
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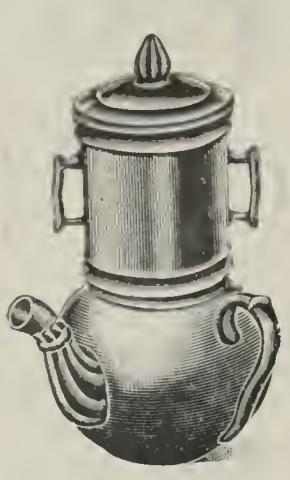
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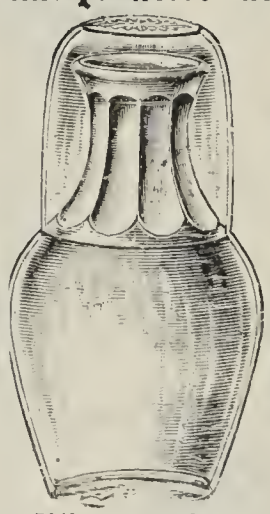
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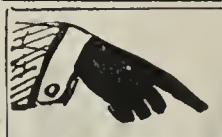
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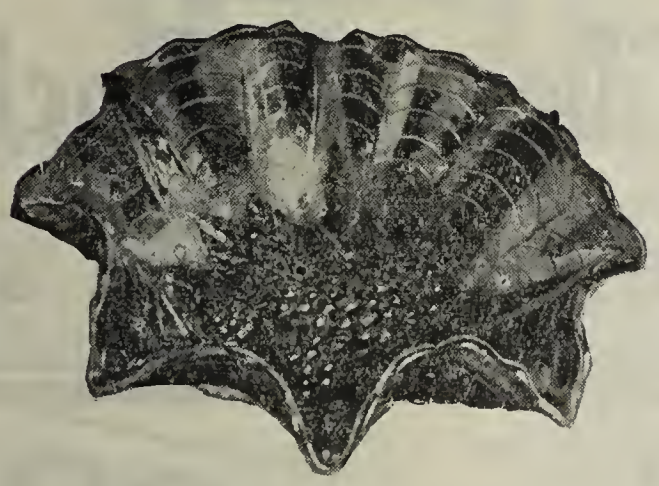
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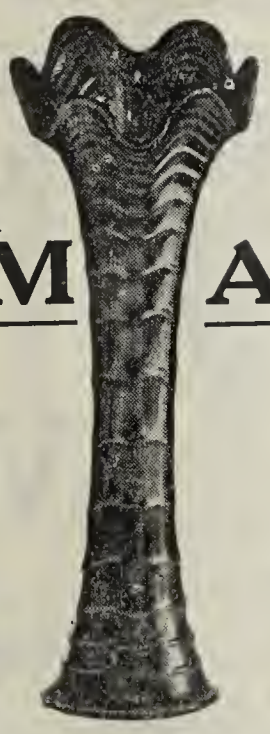
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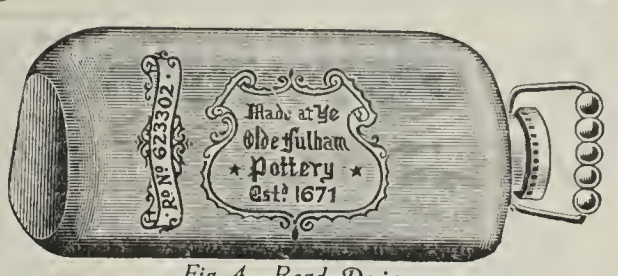


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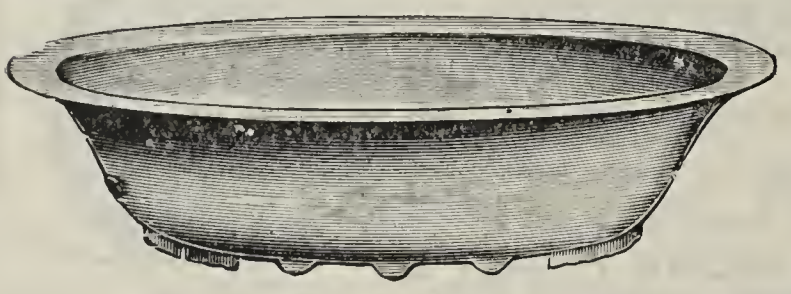
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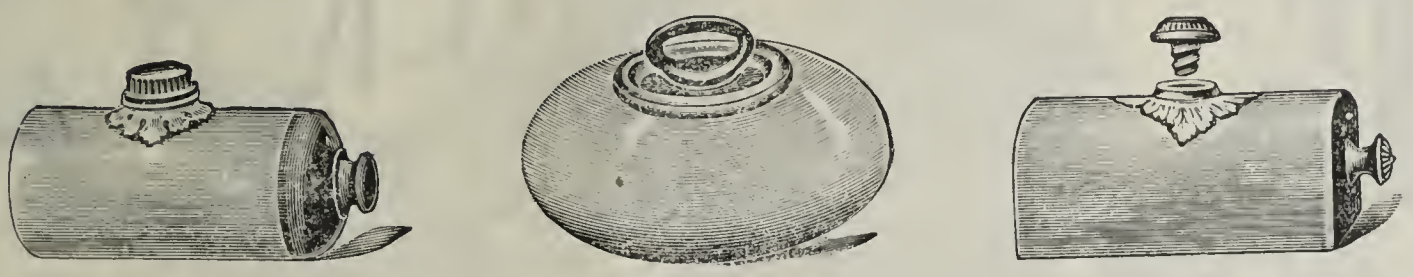
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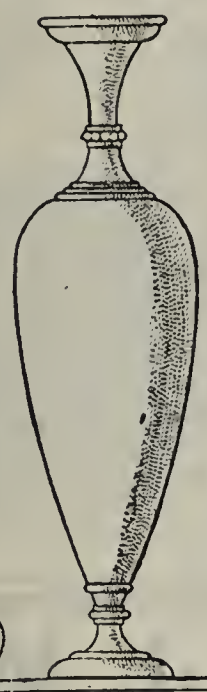
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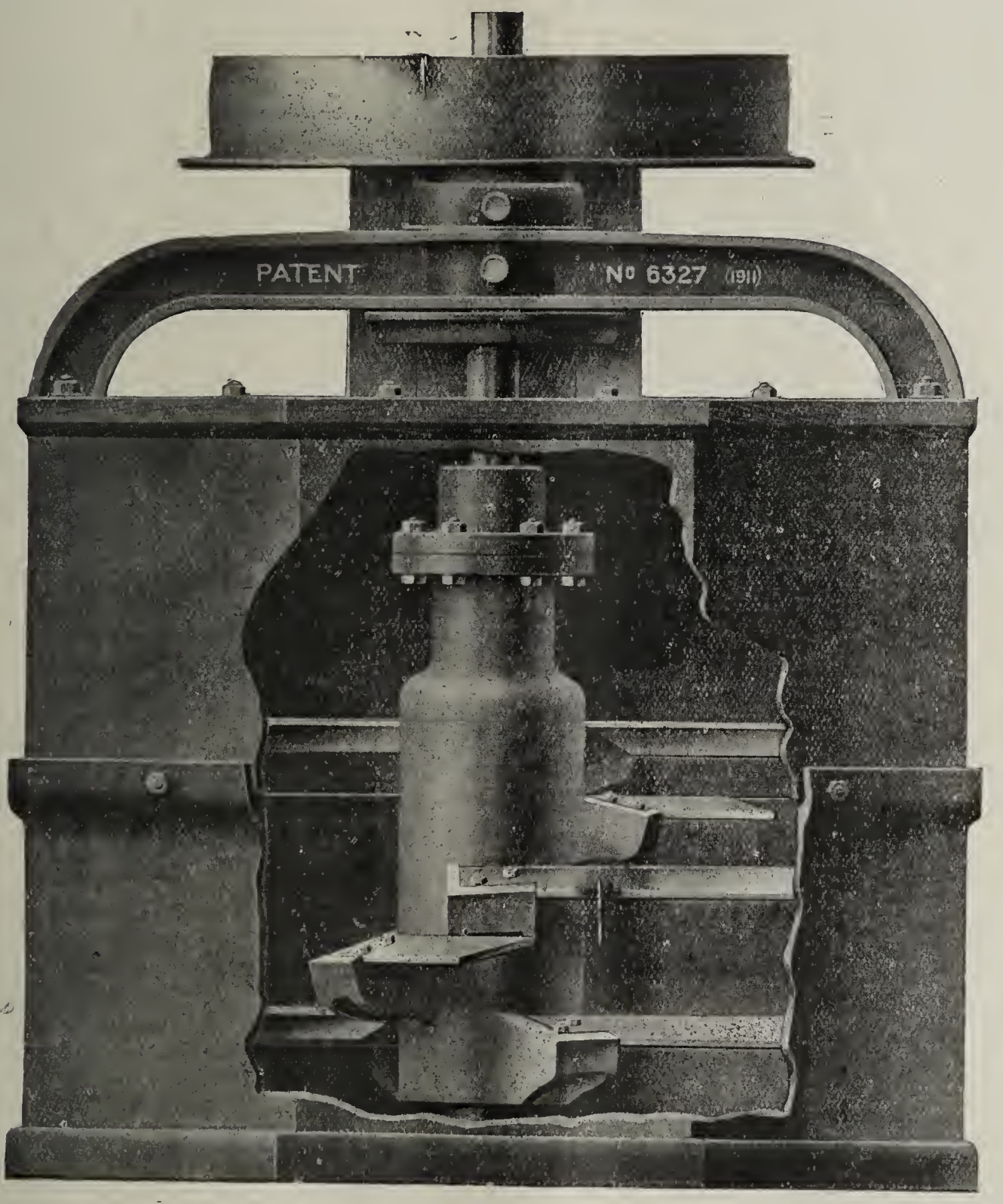
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Editorial Notes.

POTTERY AND PATRONAGE.

ONE of the most characteristic features of the history of the pottery industry in this country has been the manly self-reliance of the British master potter. The famous Continental potteries, in their early days at any rate, depended entirely on the support of the "great ones of the earth." Each works flourished only by favour of some monarch, prince, or noble, and decayed when his interest in his pet project waned. The products of such factories were turned out almost regardless of cost, being intended for presentation to those whose favour was desired, or for sale to obsequious clients whose fear of the patron prevented their haggling over prices, however much they might inwardly rebel. An industry carried on under these conditions could not but resemble a hothouse plant; its lovely products appealed only to a select few, and were unable to endure exposure to the open market.

In this country, on the contrary, the making of pottery has been a hardy growth, trained to endure the rudest shocks of competition. Though there have not been lacking firms whose beautiful wares have won the notice of the highest in the land—notice that has been graciously accorded and gracefully received—yet it is among the great and growing numbers of the middle classes in this country and throughout the world that British pottery has found its largest and most profitable outlet, with an appreciable overflow to the multitudinous masses beyond. The manufacturer's appeal has always been not for individual, but for popular, approval. The general public are his best patrons, and accordingly he caters for their requirements—too closely he is sometimes told; to which he replies that he is in business to supply pots, and not, necessarily, art instruction. His methods have been amply justified by results; and, so long as he can retain by careful study of the prevailing taste the public patronage thus gained, his business will stand broad-based and firm, and independent of the fickle favour of the dilettante and the connoisseur.

OUR LATEST PRIZE COMPETITION.

IN an Editorial Note last month we offered two prizes to the value of £3 3s. each, subject to the conditions specified below, for the best description of—

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The descriptions must reach us not later than first post on Nov. 12.

The judges will be the Editors of THE POTTERY GAZETTE, and their decision on all points shall be final.

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part of any contribution, whether successful or not, in THE POTTERY GAZETTE.

We hope to announce the result of this competition in our December issue, and believe that it will prove of exceptional interest. The terms were carefully drafted with a view to avoiding ambiguity, and the only question which has been raised is answered in our Correspondence columns.

POTTERY EXPORTS IN SEPTEMBER.

THE September exports of pottery made the worst month's business of the year. In August they fell considerably below the total for the corresponding month of 1912, and in September they were still worse by £30,000. The figures were £261,013, as against £283,100 in the same month of last year, and £210,275 in the same month two years ago. The features of the individual markets were the substantial declines in shipments to Canada, Australia and South Africa. The Canadian business was the lowest for about eighteen months, aggregating only £33,185, compared with £41,465 in the same month of last year, and £41,796 in August last. The Australian trade was only worth £22,231, a fall of over £7,000 as compared with the corresponding month, and nearly £8,000 in comparison with the preceding month. The South African exports dropped from £11,727 in August to £8,814 in September, while the figure for September of 1912 was £14,047. The American trade was likewise on a lower scale—£30,761, as against £35,400 in the corresponding month of last year—but in view of the fact that the change in tariffs was then immediately pending, no special significance attaches to the fall in this case. The South American business was worse than in August, but rather better than in September of 1912. The British East Indian and the New Zealand exports were also both lower than in the same month of last year. Trade with the Continent was at about the same level as in September of 1912. "Other countries" showed a slight improvement. Referring to the descriptions of wares, it appears that more than half the falling away was in respect of earthenware, but sanitary ware and tiles also accounted for considerable decreases. The nine months' business aggregated £2,555,923, compared with £2,216,631 in the corresponding period of 1912, and £2,170,750 in the same period of 1911.

On the other hand, the September imports were substantially greater than in the same month of last year, the figures being £92,496, compared with £76,373. The increase in the case of earthenware was about £5,000, and in the case of china over £2,000. The largest advance was in respect of red pottery, stoneware, &c.

THE COAL PROBLEM.

IT is time that the commercial community of Great Britain, as a whole, should begin to consider the position of the national fuel supply. It is generally assumed that the supremacy of Great Britain, in the industrial world, was gained by reason of her cheap and abundant coal, and the question now arises whether this same supremacy will not be lost because the supply of fuel is neither cheap nor abundant. Our manufacturing readers will have noticed that although, after a period of high prices, everything tends to get cheaper, the one exception to prove the rule is coal. The collieries have advanced their prices several times during the last fifteen years, but have not put them back again, and at the present time, when the boom in trade is subsiding, when iron and steel are rapidly falling, the coal markets remain firm and the quotations rather tend to advance than to recede. The policy of the collieries and also their workers has been to avoid any reduction of wages simply by reducing output. If the price of coal tends to get cheaper and wages are threatened, the collier works three days a week instead of four, or four instead of five, as the case may be. In effect both the private colliery owner and the actual getter of the coal are in a conspiracy to prevent British industry from getting what is an absolutely indispensable thing, viz., cheap fuel. It is of course natural, under our present system of industry, that the collieries should be worked mainly with a view to the interests of the owners and the employees; but when a deliberate attempt is made to cause artificial scarcity by working short time—as has so frequently happened in the coal trade—then it is a question whether national interests are not being sacrificed unduly to private interests. The general theory of trade is that each industry is of service to the community; and that our system of competition keeps this service at its maximum of efficiency. Lately, however, there have been signs that competition is failing in this respect, and no doubt if it should appear that in respect of the efficiency of the coal service the system of competition has failed, then no doubt it will be needful to adopt some drastic measures. We make these observations because we foresee that the time is rapidly approaching when the question of cheap fuel will be one of life or death for British industry.

BRITISH ARTS AND CRAFTS AT THE GHENT EXHIBITION.

(BY OUR OWN REPRESENTATIVE.)

IN the report on the Ghent Exhibition, published in the June issue of THE POTTERY GAZETTE, mention was made of the very remarkable section devoted to British arts and crafts. At the time of my visit no catalogue was available, and so, although I could readily recognise the distinctive productions of several famous ceramists, I refrained from a detailed description, not knowing whether they wished their work to remain anonymous as part of the collective exhibit. Nor was it until the beginning of last month that a catalogue—and then an unrevised one—could be obtained, so that it is now unfortunately somewhat late in the day to give further notice to the beautiful and much-admired wares which were on view.

The Section as a whole did great credit to the organising committee. It included a model church, a few fine fresco paintings, and many excellent specimens of metal-work, needlework, furniture, book-binding, &c. The pottery and glass industries—the most artistic of handicrafts—made a brave show, though the small number of firms and individuals represented suggests that the application of Art to Industry in the British Isles is still the work of a select few rather than the outcome of a general movement.

The catalogue of the Section is in itself an interesting volume, but it might have been greatly improved by the inclusion of more descriptive matter referring directly to the objects on view, instead of the very general essays on the various departments which precede the bare lists of the exhibits. The catalogue, by the way, is printed in French as well as in English. The essay on "Pottery" is contributed by Mr. A. H. Powell, who supplies a brief, not to say meagre, survey of the technical processes of pottery manufacture, and a *résumé* of the history of the craft. Mr. Powell says, "It is to be remembered that, alongside of its more splendid achievements, pottery was

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FOLLOWING ON THE RECENT ROYAL VISIT TO LANCASHIRE WE HAVE RECEIVED AN OFFICIAL INTIMATION THAT **HIS MAJESTY KING GEORGE V.** HAS BEEN GRACIOUSLY PLEASED TO AUTHORISE US TO DESCRIBE OUR WELL-KNOWN ARTISTIC PRODUCTIONS AS THE

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ROYAL LANCASTRIAN

POTTERY.

THE MOST ARTISTIC BRITISH POTTERY OF THE CENTURY

ever a humble art—within the reach of the poor man—not comparable for difficulty with the art of the smith or enameller or the use of the precious metals; and this it may be in part that has given to it, no less than to them, its hold upon the hearts and imaginations of men. Above all workers in pottery, in all its forms, stand the Chinese. It is in especial their art—a fact we recognise in our generic term of "china." Where other nations proved themselves able workers in clay, the Chinese, as it were, spoke it as their mother tongue. Every part of the potter's work was known and practised by them, and there is in their most ancient works that have come down to us a greatness that is above all question. They are the master potters of the world. The earliest date ascribed for the making of Chinese porcelain is somewhere between 100 and 200 years before Christ. The earliest making of hard porcelain in Europe in any way similar to Chinese ware was not greatly less than 2,000 years later. Their work has been copied and analysed and exhaustively examined but never approached. No work was ever better done or more beautiful than the myriad shapes wrought and painted for their domestic use or enjoyment, that make up the art of Chinese porcelain manufacture."

After an appreciative reference to mediæval pottery, Mr. Powell proceeds to deal with the pottery of modern commerce. "Broadly (he says), we may think of it as taking its origin about the year 1750 with the manufacture of European porcelain. This manufacture, after widespread endeavour, finally crystallised at several well-known centres into flourishing factories, carried on, some by individual unassisted enterprise, some under Royal subsidy and patronage—these have continued actively engaged upon various kinds of pottery and porcelain until the present day. The road travelled since that remarkable revival of interest is clearly marked for us by the specimens in all our chief museums. Here we may learn how enthusiasms rose and fell, changed, took other turnings, and gradually concentrated themselves, more or less everywhere, upon becoming just motive power to trading companies. This inevitable course brought the 'useful' along with it, but forgot the other subtler values, until this modern manufacture, from having been one of extreme delicacy and beauty of workmanship, abounding, too, in pretty inventions and bright colour, became, at the end of the nineteenth century, no more than a travesty of the potter's art. During these latter years reaction in various directions has made its appearance. The work proper to those in the factories has been from time to time supplemented by that of free artists. New potteries have been started with fresh and important ideals for the art, and public interest in these and other developments, if not as yet very deep, is certainly widespread, expectant, and sympathetic. But in the meantime the great potteries are, for Europe, the storehouses of all the traditions of all the ages, and these reactionary efforts, originating independently of the older establishments, may be taken to represent a protest, and a growing protest, against the negligence by the trade of the higher aspects of the potter's art. For it is evident that there cannot come any real improvement, however skilful the workers may be, from the readjustment of old patterns and designing in the styles, wherein factory decoration now mainly consists. The secret of the future of pottery may naturally be looked for from among the working potters. Could these be given scope, could the skill, the patience, the intelligence, now spent in enduring what is at best little better than a life of dull routine, be turned to its proper use—towards, that is, an acknowledged reliance upon its own inventive and free effort, the whole trade might thereby be lifted to a higher plane of endeavour, and pottery manufacture be endowed with a more stable, as well as a more admirable, position."

This rhetorical flight is all very well in its way, but it does not carry us very far. We think that the visitors, as we have already said, would have preferred to have been told a little more about the particular bowls, vases, &c., shown in the section—the influences that inspired the designs, the processes by which the wonderful effects were produced, and so on. Several of the specimens would each have afforded a text for a most illuminating little paragraph, on, for instance, the faithful reproductions that are now being made of even the best of the old Chinese wares; or again, the laborious chemical researches which have resulted in the production of the exquisite lustre glazes. To our own readers who have been made familiar with these things the mere mention of the names of the exhibitors will, however, go far to indicate how much the section owed to the contributions of some of our leading ceramic artists. The majority of the specimens were arranged in special glazed cases, but a few choice pieces were placed among the furniture exhibits, lending additional attraction to the tables, shelves, and cabinets, and themselves losing nothing by occupying such coigns of vantage.

The Pilkington Tile and Pottery Co., Ltd., of Clifton Junction, Manchester, were represented by upwards of fifty pieces, comprising rich coloured and lustred decorations, one ruby lustre vase being truly magnificent. A superb vase bearing two rampant heraldic lions, was in true harmony with the Gothic revival, and well merits a place in some historic home. Another bore a bevy of graceful dancing girls in keeping with the strictest classic tradition. But the temptation to enumerate the specimens one by one must be resisted, lest the blue pencil of the Editor should be brought to bear on my encomiums. Suffice it to say that this firm's display is typical of modern Art at its highest. Many of the designs are from the gifted hand of Mr. Gordon M. Forsyth, art director of the company, and others are supplied by Mr. W. T. Mycock, Mr. G. Rodgers, Mr. R. Joyce, and Mr. C. E. Cundall. Among the pieces scattered through the furniture department may be mentioned an elephant in rich coloured glaze, two fine jardinières, a lustre jar with cover, another jar in ruby lustre, and a vase in rich orange and vermilion glaze.

Mr. Bernard Moore, of Stoke-on-Trent, had on view a splendid selection of decorative glazed pottery, including Persian blue crackle, gold flambé, wonderful transmutation effects, and some charming purple and yellow crystallines. Quite a masterpiece was a magnificent vase 18 in. high in lustre and sang de bœuf, bearing a dragon painted by Mr. R. Tomlinson, R.C.A. In one case, as mentioned in my previous report, was a little rouge flambé rabbit of old Chinese design, which had undergone the ordeal by fire at the Brussels Exhibition, but had suffered little damage beyond a change of colour.

Doulton & Co., Ltd., of Lambeth, S.E., exhibited a couple of bowls of salt-glazed coloured stoneware by Mr. Mark V. Marshall among the pottery, and, among the furniture, a variety of brown jugs of the same material, some by Mr. H. Simson and Mr. J. H. Mott. Three salt-glazed coloured stoneware vases, one with a group of birds, were designed by Mr. Marshall and coloured by Mr. W. Gandy. Mr. Marshall has also modelled a stoneware statuette of a "Watteau Shepherdess," which was placed near two similar subjects, "Lady" and "Market Woman," by A. L. Harradine.

Josiah Wedgwood & Sons, Ltd., of Etruria, Stoke-on-Trent, although they took no part in the commercial side of the Exhibition, lent most valuable support

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To Messrs. Grimwades, Ltd. **[Copy of Letter received from Customer.]**

Ferndale, Glam., 16/7/13.

Dear Sirs,

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Again thanking you, yours faithfully, DAVID HANNAH.

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to the art section. They contributed among other items a large covered blue and white jar, painted underglaze ; and a large two-handled vase, painted in blue, red, lustre, &c. ; a deep bowl, blue painted under-glaze and lustred ; a covered pot, blue and brown on white, painted under-glaze, and several other pieces, all designed and painted by Mr. A. H. and Mrs. Louise Powell, as well as a painted dish designed by Miss M. Hindshaw, and an earthenware plate painted by Mr. G. C. Bunney.

The Ashby Potters' Guild, of Woodville, near Burton-on-Trent, showed among other exhibits of a highly artistic character an altar vase and a handled vase in antique blue mottled glaze ; a jar vase in pheasant brown and blue glaze ; a vase in brown vellum glaze ; a handled vase in Chinese purple glaze ; vases, opalescent glazes, and a pair of covered vases in partridge brown glaze, all designed by Mr. Pascoe H. Tunnicliff, and a pair of decorated trinket boxes in golden yellow lustre, designed by Miss Annice Buck.

A number of lustre-glazed pieces, designed by Mr. William De Morgan, and executed by Messrs. C. and F. Passenger, were exhibited by Mr. F. D. Ewbank. Most of these were "somehow good," while none were so poor as to induce a feeling of relief that "It never can happen again."

Mr. W. Howson Taylor, of West Smethwick, Birmingham, made a conspicuously choice display of lustred vases and bowls of characteristic brilliance and fineness of body.

Mr. W. H. Cowlishaw, The Iceni Pottery Co., Letchworth, Herts, mustered a numerous array of bowls, dishes, vases, &c., some with attractive lustres, delicate piercing, and silver decorations. Sir E. H. Elton, Bart., of Clevedon Court, Somerset, sent a platinum crackle jar, and a blue green decorated bottle of his own design, executed with the assistance of Mr. G. Masters. Mr. G. J. Cox, of 42, Upper-Richmond-road, East Sheen, Surrey, sent a selection of Mortlake Pottery of his design, executed by Mr. E. J. Baker. Martin Bros., The Southall Pottery, Southall, showed a variety of salt-glazed stoneware vases, tastefully decorated. Miss Phœbe Stabler, 34, Upper Mall, Hammersmith, W., is well known as a designer of fascinating little earthenware figures, and several of these were on view.

Stevens & Williams, Ltd., of Brierley Hill, near Stourbridge, provide strong evidence for those who support the contention that the British glass industry lags no whit behind the ceramic branch in cultivating artistic design and execution. Their case of richly decorated crystal contained a variety of articles, some useful and all decorative. Here were to be seen tumblers, wine glasses, decanters, liqueur glasses, rose bowls, vases, &c., all of such real merit that it is difficult to select any piece for special mention. Of conspicuous excellence were : A vase in hand-etched crystal, designed by Mr. W. Northwood, and executed by Mr. W. Hill ; cut wine decanter and stopper in old English style, designed by Mr. T. Gold, and executed by Mr. W. Oakden ; a tall vase in cut crystal, designed by Mr. J. Northwood, and executed by Mr. E. Hammond ; and a large pillared ewer in rock crystal, designed by Mr. J. S. Williams-Thomas, executed by Mr. Bohn. Several other pieces designed by Mr. J. S. Williams-Thomas are eloquent of the artistic talent of that versatile gentleman to whose administrative abilities the firm owes so much.

A valuable assortment of glassware designed by Mr. Harry J. Powell, executed by T. Smith, T. Avery, and others, was also supplied by James Powell & Sons, Whitefriars, E.C. Certain of the lighter pieces suggested that a part at least of the genius of the old Venetian glass-workers had migrated from the Lido to the Thames. Some meritorious stained glass work had been sent in by various designers.

THE POTTERY INDUSTRY IN THE U.S.A.

THE annual report of the United States Geological Survey on "Clay Working Industries" includes a section dealing with the pottery industry. The industry made considerable progress in 1912. The year opened with bright prospects, and these were so fully realised that the value of the pottery products marketed was the largest in the history of the industry. This was due partly to the general prosperity enjoyed by the country at large, but more especially to the steady improvement in the wares themselves in body, design, and decoration. American pottery is gaining a stronger hold on the market and is becoming more popular every year. Many, if not most, of the best hotels and clubs in the country are now using large quantities of domestic pottery.

The value of all domestic pottery marketed in 1912 was $36,504,164, an increase of $1,985,604, or 5·75 per cent. The imports, which comprise almost exclusively the higher grades of ware, decreased $1,083,086, or 10·18 per cent. For the first time in 10 years the value of pottery imports fell below $10,000,000. With the value of the domestic pottery increasing and the imports decreasing, the outlook for the industry seems to be that 1913 will show even greater progress than 1912. The proportion of domestic production to consumption in 1912 was the highest ever reached—81·45 per cent. This, of course, applies to all pottery products, but the domestic production of general wares alone is nearly two-thirds of the consumption.

Every product, except stoneware and yellow and Rockingham ware, participated in the increase of 1912. The most important variety in value, white earthenware, showed an increase of 3·22 per cent. The value of this variety decreased in 1911, but the increase in 1912 more than offset this decrease, so the value of the product in 1912 was slightly greater than in 1910. Other important products showing a large increase were sanitary ware and porcelain electrical supplies.

The number of operating firms reporting continued to decrease, a loss of 15 appearing for 1912, the decrease being principally in plants making the lower grades of ware. A number of plants making white ware also went out of business, but new plants in contemplation at the close of the year, if erected, will nearly, if not quite, take the place in productive capacity of those that ceased operations.

The following figures show the statistics of the production of pottery in the United States in 1912, by varieties :—Number of operating firms reporting, 434 ; red earthenware, $958,270 ; stoneware and yellow and Rockingham ware, $3,919,778 ; white ware, including C.C. ware, &c., $14,829,431 ; china, bone china, Delft, and Belleek ware $2,177,305 ; sanitary ware, $7,902,255 ; porcelain electrical supplies, $4,927,316 ; miscellaneous, $1,789,809 ; total, $36,504,164. The value of the pottery products of the United States in 1912 was the largest yet reported, exceeding that of 1911 by $1,985,604, or 5·75 per cent., and that of 1910 by $2,719,486, or 8·05 per cent. Only one variety decreased in value in 1912—stoneware—which declined $200,830, or 4·87 per cent. With the exception of stoneware, every product reached its maximum value in 1912, the variety showing the largest gain being sanitary ware, which increased $870,797, or 12·38 per cent. The largest proportional gain was in porcelain electrical supplies, which increased $695,215, or 16·43 per cent. The value of white ware, including china, but excluding sanitary ware and porcelain electrical supplies, was $17,006,736 in 1912, as compared with $16,424,236 in 1911, an increase of $582,500, or 3·55 per cent. These articles constituted

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46·58 per cent. of all pottery products in 1912 and 47·58 per cent. in 1911. If the value of sanitary ware and porcelain electrical supplies be added, the value for 1912 would be $29,836,307, or 81·73 per cent. of all pottery products, an increase of $2,148,512, or 7·76 per cent., over the figures for 1911.

Chinaware showed an increase of $119,320, or 5·80 per cent. The value reported for 1912 was the highest ever recorded. In fact this product has increased almost steadily since 1902, the value in 1912 being $958,012, or 78·57 per cent. greater than that for 1902.

(To be continued.)

THE CHINA AND GLASS DEALERS' ASSOCIATION.

(BY OUR OWN REPORTER.)

THE annual meeting of the China and Glass Dealers' Association of the United Kingdom was held at the Golden Lion Hotel, Leeds, on Wednesday evening, Oct. 15, Mr. Samuel Hirst, the President, being in the chair. Letters of apology were received from York, Newcastle, Ashby-de-la-Zouch, Northampton, Godalming, Birkenhead, Paisley, South Shields, Warrington, Lyme Regis, Norwich, Dorchester, Uppingham, Hull and Bradford. Several of these distant members stated that if the annual meeting was held in the afternoon instead of in the evening they would make an effort to be present.

Mr. W. Neaverson, the honorary secretary, submitted the eighth annual report and balance-sheet. The committee wished to draw attention to the valuable assistance several members had again received through the Association. An illustration of the work of the Association was furnished by the fact that the honorary secretary had dealt with over 1,000 letters, circulars, &c., during the past 12 months. In November last both the earthenware and china manufacturers received a deputation from the Association to discuss the straw and packing charges. The majority of the manufacturers present were in full sympathy with the desire of the Association, and promised that the matter would receive their full consideration. Since that time the honorary secretary had not heard anything definite, but several of the manufacturers, on their own initiative, met the wishes of the Association, and had done away with the straw and packing charges, and included the cost in the goods. The committee asked all the members to support those manufacturers as much as possible. The hon. secretary had written all the members asking if they thought it advisable to decline to buy from firms who did not meet the wishes of the Association, and the replies were 90 per cent. in the affirmative. The others agreed, but thought it would not be wise to take such a drastic step, and the committee were of the same view, but were still urging upon all manufacturers to try as soon as possible to fall in with the wishes of the Association. The plus at the foot of the invoice was now gradually dying away, and the committee would like all buyers to see that it was done away with entirely.

During the year three claims have been settled for members, and in each case the claims had previously been declined by the railway companies. One of the above cases was for an empty crate, and this was a very great trouble with all dealers. The Association had one case in hand with a railway company in the south, who, because goods were sent at "owners' risk" thought they could do as they liked with them. The committee thought they could win, and if so it would be a great boon to the trade. The costs would, of course, be paid by the Association. The membership was very good and steadily increasing, 29 members having joined during the past year. This the committee would like to see improved upon. The committee wished to express their thanks to the proprietors of THE POTTERY GAZETTE for their kind assistance to dealers from time to time. The balance-sheet was highly satisfactory, and showed a substantial sum at the credit of the Association.

The President, in moving the adoption of the report and balance-sheet, said he was sanguine that the manufacturers would at no very distant date fall in with their wishes in connection with the straw and packing charges. He also felt that in connection with the plusage the dealers should take a firm stand and say they would not have plusage put at the bottom of the invoice. It was generally agreed that these charges were a great inconvenience, and dealers never knew exactly how they stood. The matter was quite as important to the small dealers as the large dealers. He was firmly convinced that when the manufacturers saw that the dealers as a whole wanted the extra charges incorporated with the cost they would fall in with the wishes of the Association.

Mr. W. C. Baynes (Wakefield), in seconding the adoption of the report and balance-sheet, pointed out that it would be a great saving of time to the dealers not to have all these complicated additions to make to the invoices. Some people thought they would have to pay more for the goods, but he thought the competition in the trade would soon regulate that. It might mean that each manufacturing firm would have to employ an extra clerk, but the inclusion of the straw and packing charges in the cost would be a tremendous boon to the dealers. Once the straw and packing charges were included in the cost it would work automatically, whereas at present the dealers had to add these extra charges every time they got an invoice.

The following office-bearers were re-elected :—President, Mr. S. Hirst (Leeds) ; vice-presidents, Mr. W. Ward (York), and Mr. J. L. Fox (Leeds) ; hon. secretary, Mr. W. Neaverson (Huddersfield). Committee :—Messrs. W. C. Baynes (Wakefield), A. H. Young, Walter Taylor, and J. J. Hirst (Leeds), G. Ward (Dewsbury), C. Scott (York), J. Martin (Derby), J. G. Stewardson (Newcastle), T. Hayward (Manchester), W. G. Church (Northampton), G. E. Rushworth (Bradford), — Lewis (Northallerton), W. C. Rhodes (Ilkley), and W. Waddington (Keighley).

In returning thanks for their re-election, the President and the Secretary said they hoped to retain office until the question of the straw and packing charges was settled.

On the motion of Mr. Baynes, seconded by Mr. Ward, the following resolution was unanimously adopted :—"That as no intimation has been received from the Manufacturers' Association that they are prepared to incorporate all advances and packing charges in the price of the goods, our secretary be instructed to draw up a circular, and send to every manufacturer in the Potteries asking them individually if they cannot arrange to incorporate these charges in the coming year."

A letter was received from a member asking if the committee could not approach the railway companies with reference to the forty-eight hours for clearing goods and second handling. After discussion the meeting decided to allow the matter to stand over in view of the fact that the matter was being taken up by all the Chambers of Trade.

Several other matters were discussed, and it was decided to hold the next ordinary meeting of the Association at Stoke-on-Trent on the occasion of the British Pottery and Glass Manufacturers' Fair in February.

The usual votes of thanks to the chairman concluded a most successful meeting.

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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

Doulton & Co., Ltd., Royal Doulton Potteries, Lambeth, whose palatial premises at the South Eastern end of the metropolis are as forcible an indication as any of the extent of their enterprise, and whose many-sided activities as potters would keep the historian busy for many a long day, are never eontent with past laurels, though these be many. In their stoneware, faïence and art pottery, as in their heavier productions, sueh as architectural, sanitary, garden, and other allied pottery wares, they are ever producing something with the idea, if possible, of eclipsing all previous efforts. However difficult it may be to keep breaking reeords, especially when past achievements are marked by the quality of super-eminence, there is, at the same time, a distinct hopefulness in a manifest desire to be eontinually in the vanguard. The showroom at the Lambeth Pottery always resembles a mammoth exhibition or museum, and hours might be spent there by anyone having artistie leanings, for, in whatever direction one may be biassed, he is sure to find something that is "just it." In a number of their new patterns in salt-glazed stoneware there is evidenced a distinct touch of modernity. In colour, which naturally cannot be expressed in blaek and white, they have the riehness, and at the same time sobriety, which always distinguish the Lambeth productions. They are eminently satisfying things to live with, and will appeal to every artistic purchaser. Effective use is made of a method of decoration—hand-worked in all its stages—which permits of a subtle variation of line and strength, and gives the play and life essential to an object for house deeoration. We have to leave our readers to exercise their imaginative powers in mentally transforming our blaek and white illustrations into real, tactile examples of rich colour blendings, forceful and expressive in their beauty; for such the originals undoubtedly are.

Doulton & Co., Ltd., Burslem, and 14, St. Andrew-street, London, E.C., have long enjoyed universal celebrity for the high quality and wide scope of their manufactures, and the more one sees of their productions the more one wonders whether there is really anything in the domain of practical potting which this renowned firm in its activities does not cover. In spite, however, of a predisposition which one instinctively feels to concede the firm's stand-



[*Photo. by "The Pottery Gazette."*

DOULTON & CO., LTD., LAMBETH: SALT-GLAZED STONEWARE.

ing, such a theoretical knowledge, after all, is only of passive significance. Something more is needed on the part of the retailer and the merchant—aye, and on the part of the public too—viz., a personal conviction which a practical acquaintance with the firm's produetions alone can give. It is only when one comes to grips that he discovers that there is something more than merely accidental in these early impressions; they are inborn of tradition. So much by way of introduction, though it may be redundant. I recently called at the factory in Burslem, and found great pleasure in being escorted through their studios and showrooms by Mr. Chas. Noke. To say the least, I was thoroughly invigorated by the variety of new lines which I was privileged to see, duplicates of most of which I believe are already in the hands of their respective agents. It has

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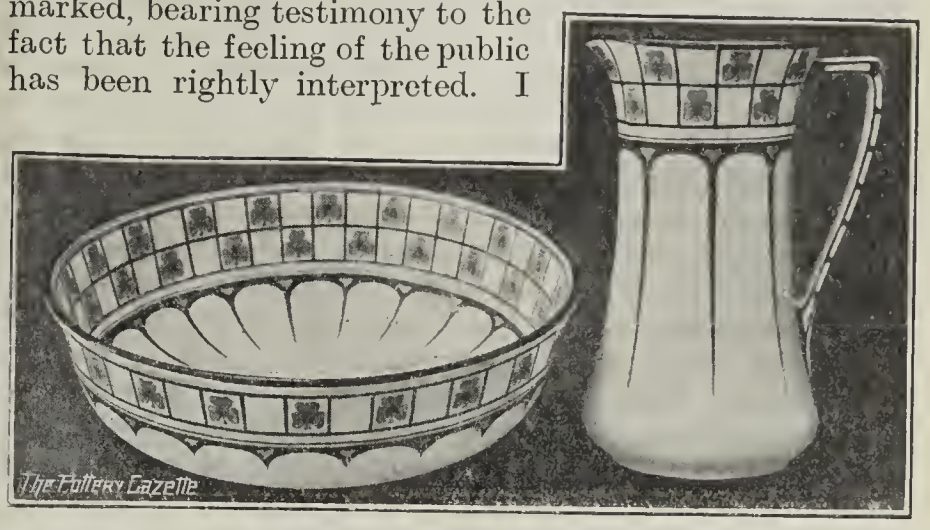
WRITE FOR NEW CATALOGUE AND PRICE LIST.

often occurred to me whether in the corners and recesses of some of our big and historic factories sufficient could not be found, the revival and re-introduction of which could be applied to meet the exigencies of changing fashion, and the needs of almost every class of buyer. The multitudinous variety of aspects and situations which must have been encountered through a historic past, one would almost think would constitute a sufficient storehouse from which to draw for present needs in the matter of design. But I am assured by Doulton & Co., Ltd., that I was never more mistaken; that the public is always on the look-out for something new, and must have it. Consequently a continual strain is put upon the resources of the designers. Is it, then, to be wondered at that we hear so much to-day about reproductions with original adaptations? But this is digression. I was particularly impressed by the energetic attempts which have been made by Doulton & Co., Ltd., to provide something marked by originality in relation to their everyday lines, and there was quite a smart range to be seen in dinner patterns, many of which seemed to me to be particularly fresh-looking, though, at the same time, conserving some of the qualities which have been most appreciated by the experience of the past. The whole of them seemed to be characterised by simplicity and modesty, in other words, they were good, simple and fresh, three qualities essential I think, to real success in domestic pottery of to-day. Amongst these, standing out characteristically, was the enamelled "Exeter" pattern on the "Bristol" shape, shown in our photograph. This is an admirable thing. It has a scale border, about half an inch wide, which is treated principally in cobalt or green as predominating colours, definition being given to the scales by means of black and white relief. This border is brought up close to the edge of the pieces, and some slight distance from it there is a garland print, the various terminals of the festoons being connected with a single enamelled rose. The edges of the pieces are lined off in the predominating colour of the scale border, and consequently the pattern may be commercialised by the absence of gold. In every sense of the word this particular design is dainty, and cannot fail to appeal to a wide circle of



EXETER PATTERN, BRISTOL SHAPE: DOULTON & CO., LTD., BURSLEM.

buyers. There is only one thing more to say about it, and that is, that the whole of its decoration is under the glaze. Could any quality be more commendable for such a useful branch of pottery as dinnerware, which, as a rule, the public does not buy for ornament, although it is a happy circumstance when one can get a combination of the two functions, and a service withal which one is not afraid to put to fairly heavy use? An underglaze colour fused into a glaze at a high temperature is at once placed out of the region of harm, and is, at the same time, rendered permanent, so that any development along these lines cannot fail to be appreciated by the trade. Another capital design is the "Countess," which, although it has been on the market for some time, will still bear appreciation here. The beauty of this pattern lies in its cameo-like connections of the festoons. In spite of the fact that this design has shared the lot of many another in that it has been slavishly copied, so I am told, elsewhere, it remains a paramount feature of the daily orders. (By the way, when is this monomania for copying competitors' designs likely to ease off?) Doulton & Co., Ltd., have many other dinner patterns of recent institution, the demand for which has already been marked, bearing testimony to the fact that the feeling of the public has been rightly interpreted. I



TOILET WARE, "LOWTHER" SHAPE: DOULTON & CO., LTD., BURSLEM.

noticed quite a number of leanings towards the old Leeds styles, and on making a remark to that effect, I was enlightened as to the cause. Some time ago the firm was fortunate to secure through their art designer the original pattern book of the Leeds factory, a circumstance which places them in a unique position. Period designing is such a feature of the age that an acquisition like this cannot fail to be extremely valuable. In toiletware variety and newness is as apparent as in the dinnerware. Our illustration is of the "Lowther" shape with decoration D. 3655, which is a quite remarkable design. It emulates partly the characteristics of a tile background, supplemented by geometric curves which give it sufficient severity to bring it within the present feeling, and, at the same time, lending it conviction, without running the risk of making it too staid or uninviting. The D. 3634 design is an extremely uncommon type of underglaze enamelling. It is done on the "Mayfair" shape, and is a representation of a country cottage with its surrounding scenery. The colours are intensive to a degree, on the other hand they are toned down in a remarkable manner by the introduction of a warm cream colour ground. At the moment, when there appears to be an everywhere apparent tendency towards vividity in the matter of colouring, there is no knowing how such a design may "catch on," and the result will be awaited with interest. Another illustration of this feeling for intensity in the matter of colouring is to be found in one of the most recent pieces emanating from the Doulton factory, a tall-shaped vase entitled "The Gipsy Encampment." The title has been well chosen, for the work depicts a sunset scene with the encamped gipsies preparing their evening meal. The scenic effect is quite remarkable, whilst the colours are as brilliant as the subject deserves. So far, I have only dealt with that phase of the company's work which affects ordinary everyday commercial pottery, but I cannot refrain from referring to some of the wonderful productions occupying a vastly superior plane which I was allowed to see in the showrooms. Immediately on entering the room one is brought face to face with a showcase,

the contents of which constitute one of the most handsome collections of artistry as applied to potting that one could wish to see. In it is contained a single representation of practically the whole of the firm's renowned artists, and amongst others the work of Messrs. Raby, Allan, Dewsbury, White and Plant stands out with vigour. Canvas painting, to my mind, is absolutely eclipsed by some of these pieces, the colour schemes of which are beyond ordinary powers of description. One of the principal tables of the room holds three massive vases, mounted on show plinths. The centre one—a most commendable piece of work—is a floral painting by Raby, whilst the side pieces are respectively a cattle scene by Hancock and "The Summer Carnival" by White. Each is a veritable masterpiece, and although it is not uncommon to speak of such pieces in terms of hundreds of guineas, they are for sale nevertheless. Another vase of Hancock's, depicting a Highland cattle scene, in the painting of which H. M. King George was particularly interested on the occasion of his recent visit, is now finished and on view in the showroom. I will not attempt to describe it, but only say that the feeling which the artist has imparted into his rendering of the misty background of the hills is weird in its realism. The firm's enterprise in the direction of lavish decoration for American tableware could only be described in an article which treated of nothing else, exceedingly beautiful, and it seems pitiful that English people who can afford to buy it—it is naturally expensive—have not yet learned to appreciate the value of the thought and labour which has been entailed in the achievement of such effects. The crystals are not merely superficial; they are profound and penetrating, and are reminiscent of that wonderful collection of crystalline decorations to be seen in the showrooms of the Royal Factory at Charlottenberg. Finally, Doulton & Co., Ltd., have recently produced a capital range of well-designed coloured figures in a style absolutely unique, the demand for which has been spontaneous; and also a line of light vases and ornaments, daintily tinted, to which is applied an equally light geometric design, which can only be described as pure artistry. It does seem strange that whilst the public can often appreciate the value of art as allied to painting, they are woefully unmoved when they come to the region of drawing. It is to be hoped that the series to which I refer, if it does nothing else, will at least serve to educate the public mind in a direction in which stimulation would appear to be badly needed.

Blairs, Ltd., china manufacturers, Longton, who are represented in London by Joseph Lockett & Sons, at 26-27, Hatton-garden, E.C., have not figured in these "Buyers' Notes" for quite some time, and in fairness to ourselves it should be stated that the explanation of



[*Photo. by "The Pottery Gazette."*

BLAIRS, LTD.: A NEW LINE IN CHINA VASES.

so with some relief I lay down this aspect for treatment on a future occasion. Before closing the present notes, I will simply refer briefly to three other classes of Doulton production. A special table contained an admirable presentation of rouge flambé glazes, which, for depth of colouring and velvety texture, I should imagine it would be really hard to beat. The gradations of colour, and the wonderful crystalline effects produced by the caprice of the furnace in some of these pieces, are charming in the extreme. In some, the colour shades off to a real brown, whilst in others there are gorgeous tints grading off through the red to a distinct violet. One is reminded in viewing these pieces that there is such a thing as the spectrum. One of the pieces which I saw was of a wonderfully rare Persian violet tone, the accentuation of which in daylight is quite extraordinary, whilst, on the other hand, it is entirely defeated when subjected to an artificial light. A series of artistic pieces recently brought out by the firm is known under the general designation "Special Crystalline." This ware is produced at an exceedingly high temperature, much higher than is usually attempted commercially in this country. It might well be described "Hard Paste Porcelain," for its texture is quite beyond that of ordinary English china or earthenware. The crystalline effects produced on some of these pieces are this is to be found in the fact that they have been so busy that they have found it difficult to spare time to accord the writer an interview, but his persistence has been ultimately rewarded, and he is now fortunate enough to be able to print a few lines with regard to some of their innovations. "Matchless for the Table" has come to be regarded as a term just as closely allied to the mention of Blairs' china as "Matchless for the Complexion" is in conjunction with the mention of a certain brand of soap, and if I may be pardoned here for soliloquising to the extent of giving away a secret, I would suggest that, just as in general advertising no feature is more commendable than that of insistence, so with their distinctive names china manufacturers—and all other manufacturers, for that matter—cannot possibly do better than adopt some clearly expressive and impressive phrase which, always assuming that it is merited, is calculated to be recalled to the mind on every occasion when the manufacturer's name may be mentioned. Blairs, Ltd., have long been noted for artistic decorations on graceful shapes at popular prices, and in tea and breakfast ware, which has hitherto constituted their forte, they have always a capital selection to offer. Recently, however, when I entered their room at 26, Hatton-garden, I was specially impressed with what appeared to me to be quite a depar-

ture with them, this being a series of light, dainty and elegant china vases, which would seem to be particularly suitable for employment with the lighter types of furnishings. The range is select and extremely good, and I am privileged to be able to reproduce a few of the pieces which will serve to give a very fair idea of their general characteristics. In the first place, I might mention that one of the principal features of the series is their lightness in weight. Made on the casting principle, they are evenly formed, and are pleasing to handle, whilst at the same time mechanical production has resulted in the "fixings" being kept down so as to coincide with a popular demand. Of this series, No. 150, one of the pieces included in our illustration, is to my mind one of the finest of the range. It is the gracefully shaped covered vase whose decoration consists of conventional black vertical stripes or bands, over which is applied a gold leafage arrangement, the bands being themselves set sufficiently wide apart to admit of the interposition of well-executed floral groups. In many of the patterns the changes are rung *ad libitum* on this decoration, the stripes being alternated as regards colour, and the respective intervening sprays being so variegated as to create quite diffuse effects. The plainer shape shown in our photograph has a blue border with a gold spotting, in combination with an enamelled floral design, a burnished gold edge giving it the finishing touch. This very effective design is numbered 133. The shape with the flanged top which we illustrate is also extremely tasteful. Other interesting numbers are 134, which has also a cobalt border. with a gold spotting and floral festoons; covered vase No. 140, with a sort of art nouveau design, and No. 121 of a squat shape with a light decoration carefully adapted to it. It is almost invidious to select particular pieces for special mention from such a select assortment, and as it is likely that this new range of goods will be added to almost daily, all that I can hope to do is to bring the matter very generally before the notice of buyers, and then leave them to interest themselves sufficiently in the line to acquaint themselves more specifically with it. In their staple department of tea and breakfast ware, Blairs, Ltd., have some exceptionally good new lines, some of the principal of which would appear to lie in the direction of coloured bands with gold spottings and lace-like and mosaic effects, some of which are specially worthy of mention. In some of these, four or five different colours can be had in the bands, and the maximum possibilities of the designs are brought out by variation and transposition of detail. That popular design, generally, if inadvertently, described as "Crown Derby," a combination of green, brown, black, red and gold, has been distinctly commercialised by Blairs, Ltd., and is now offered by them at a price which, consistent with everything like quality, might be regarded as unassailable. There is much else to interest one in the firm's Christmas lines, but exigencies of space forbid me proceeding further just now.

Gibson & Sons, Ltd., Albany and Harvey Potteries, Burslem, have a fine selection of samples on show just now at their city showroom in Gamage-buildings, Holborn-circus, E.C., where they are represented by Mr. Sydney Gibson as agent, and Mr. S. F. Forward as London representative. The name of Gibson & Sons, Ltd., has always been associated very intimately with teapot manufacture, and in this connection, bearing in mind the two factors, quality and quantity, I am sure I should not be found fault with in describing them as holding a premier position. Having a trade reputation to maintain such as can only be described as unique, they have never failed in their efforts to bring out season by season something which will have a stimulating effect, and attract attention in a very direct way to their special productions. Certainly there has always been something new and interesting to be seen whenever we have visited their rooms. As a manufacturing house their fame was originally won, and for a long time remained contingent, upon the manufacture of teapots, and until some ten years ago they were content to confine their attentions to this special phase of the pottery trade. Their manufacturing facilities, however, were recognised to be such as specially befitted them, without in any way hampering or restricting their huge output of teapots, to embark also upon the production of general earthenware. The logical course was taken and ever since improvements have been embraced and facilities widened, until to-day Gibson & Sons, Ltd., have quite an enviable trade in the general earthenware branch, the principal feature of which is probably suite ware. It is necessary, perhaps, to make these few preliminary remarks, because it may be possible that even yet there may be here and there a stray dealer who, faithful, we will not say to prejudice, but to custom, still entertains the idea that Gibson & Sons, Ltd., are exclusively and essentially manufacturers of teapots, which is, as I have endeavoured to show, far from the fact. Whilst the Albany pottery with its jet and russet teapots is "still going strong," the Harvey Pottery with its general earthenware is responsible for the production of wares, which, though in no sense competing with the productions of the former, present certain qualities which demand the serious attention of buyers generally. We may be pardoned, perhaps, on this occasion for saying very little with regard to the productions of the Albany Pottery, and giving preference to the Harvey "bank," because who is there in the trade who is not already familiar with the lines of the former? With a levity which is otherwise quite undeserved we will, therefore, pass over that wonderful array of teapot specialities of almost inconceivable variety, the outcome of the resources of the Albany Pottery, with a few very general remarks. The only branch I will specially refer to just here of that particular pottery is its lustre ware. In this it seems to have produced just what the public needs, a class of production combining the maximum of brilliance, form, and general decorative effect with a full measure of usefulness and durability. An entirely new shape has been specially modelled quite recently, known as the "Dane," taking the form of an old silver piece, and it is in every way a capital line. This can be had in plain silver lustre, or with the addition of a blacked handle in emulation of the wooden handle usually fitted to the real silver teapot, and the likeness to which is, shall I say, deceptive? A silver lustre rose-bowl, with two handles following the shape of the historic loving-cup, and enriched by the addition of gold lustre, promises to be an unusually interesting line, and if the taste of the public turns out as the writer would anticipate, dealers have something here which should materially assist their turnover. And now as to the Harvey Pottery. From this side the firm may safely be said to be turning out something new almost every week, and the development has been on such a scale that Gibson & Sons, Ltd., have now many customers who were originally won and have since been held by general earthenware alone. One of the newest departures is in the production of teapot sets, consisting of teapots, teapot stand, sugar, cream and hot-water jug. In such sets there is quite a variety of style and design. The new "Silvoe" Art Ware, which has only been on show for about a month, is a fine production, and there is nothing in the whole range of the firm's productions that cannot be had in this treatment. Another fine ornamentation has

a solid black or dull ebony ground with a large overlaid stencilled rose design of a bright warm shade, the flowers being restrainedly illuminated with gold, and the edges of the pieces being finished off wth best burnished gold to excellent effect. In its particular line this design would be hard to beat. No. 5615 design is another really good thing. It has an underglaze red ground, which I am sure must have been extremely difficult to produce, because everyone knows how fugitive in its character underglaze red always is. Above the ground, and toning splendidly with it, is a decoration taking the form of a pasture subject, which gives the ground just the necessary amount of relief, whilst a burnished gold edge extends the finishing touch. Here, again, the decoration is capable of adaptation to every line which the firm makes, even to toiletware, should this be needed. For those whose inclinations are met by a pattern standing out in clear relief, the "Malacca" Art Ware has special claims. Another exceedingly nice thing is the No. 5606 decoration, having a predominating olive green ground with surmounting coloured roses and raised gold connecting briars. The "Pearline" suite ware I should describe as a combination of lustres resembling mother of pearl, and this takes a silver lustre finish in preference to gold. Finally, and with emphasis, I would call attention to the "Windsor" Art Ware, shown in a thoroughly representative assortment of articles en suite. With this design the firm clearly means to appeal to a universal market. It will only be necessary to describe this decoration in a very general sort of way for everyone to recognise it as a design which no dealer can afford to be without, for no treatment has proved to be more popular. It has a shaded ivory ground of Worcester inspiration, with the French type of light medallions in bright but dainty colouring. A feature of this ware is the ivory ground, which, although in its effect vellumed, is not of that rough type which has a marked tendency to collect dust, and is always difficult to keep clean. In our illustration, which includes a number of the pieces somewhat vaguely described in these notes, the "Windsor" ware will perhaps be recognised in the teapot to the right, which is of the "Zenith" shape.

Joseph Bourne & Son, Denby Pottery, near Derby, who have an attractive show room at St. Andrew's House, 34, Holborn-viaduct, E.C., commemorated their centenary as leadless glaze stoneware manufacturers some few years ago, and to review the evolution of their business, even in a very superficial way, is to be fascinated by the extraordinary developments which they have made, and the very successful way in which they have unfolded their resources, until to-day they are famous for a variety of impressively artistic productions, manufactured from a clay quarried in the heart of the Midlands, the functions of which, at one time, one might have imagined were very definitely restricted. It is indeed more than usually interesting to reflect that whilst the firm originally set out merely to manufacture such prosaic articles as stoneware bottles for ginger beer, ink and blacking, and receptacles suitable to the accommodation of a variety of proprietary articles, they have in their wisdom and as the result of keen enterprise concurrently succeeded in evolving some specially fine commodities, which now find a not unworthy place in the stocks of most go-ahead china dealers. And in getting to this the firm have never in the least neglected or despised the products of their humble beginning, but have, on the other hand, fostered and conspicuously improved them in order to maintain, as they still do and are likely to do, a connection which is a tangible and valued feature of their turnover. The body which



[*Photo. by "The Pottery Gazette."*

SOME ATTRACTIVE DECORATIONS BY GIBSON & SONS, LTD.

they employ as the basis of all their productions possesses some very notable qualities; not the least important of these by any means is that it is highly vitreous, so much so that the firm claim for it that it will defy impregnation by the strongest copying ink. What better material, therefore, could be employed for the manufacture of receptacles for acids and other liquids exerting violently assailable properties? That to such a body suitable leadless glazes of particularly brilliant shades have been discovered and applied must be regarded as an achievement indeed. In walking round their show room one cannot but feel impressed with the diversified palette which is discernible to-day, and which alone has enabled the firm to invade the territory of the china dealer, and it must be specially remembered that in all this not the slightest modification has been found necessary in the body, which still retains the qualities that have all along been claimed for it. From the well-established rich brown glaze—one of the first the firm produced—there has been a sustained advance, until one is now able to choose amongst a variety of pleasing shades such as cobalt, peacock blue, myrtle

"Celeste" ware, a teapot of which our photograph includes. The body is decorated with a celeste band over a warm creamy-coloured slip base, whilst, superposing both is an agreeable pattern in relief, the knob, spout and handle being treated in celeste to match the band. For oblong troughs about eight inches in length, such as the one we illustrate, there is said to be quite a demand, as they are specially adaptable to the reception of crocus and other similar bulbs. Now, of course, is the season for them, and in the various self-coloured glazes these pieces look extremely fine. There is hardly an article necessary for the kitchen which is not made in the firm's "Brown Salt-glazed Stoneware," and the "Denby" plain or plain and figured wares are supplied in quite a comprehensive variety. The "Denby chocolate" ware in teapots, sugars and creams, and jugs is a line which all dealers would do well to stock, and the "brown and green" and "emerald" wares are also phenomenal for their sales. What shall we say about the "British fireproof ware"? The firm claim to be the original makers of English fire-proof wares, and the public have surely something here which is certain to



[*Photo. by "The Pottery Gazette."*

J. Bourne & Son: Typical Denby Ware.

green, salmon pink, emerald, celeste, and the latest, known as "Heather Bloom." All these, moreover, are supplied absolutely leadless. In the matter of variety of article Joseph Bourne & Son have not, of course, as wide a field from which to reap as the manufacturer of white earthenware, but what is accessible to them is at least made the most of, and the realm of flower holders, plant pots, bulb bowls, tobacco jars, ash trays, spittoons, and the like has been seriously invaded by them. It may, perhaps, be thought somewhat strange that I should refer to such articles before mentioning their well-known range of kitchen utensils, but my idea in doing so is merely to show that the development of an ornamental department is now claiming the firm's serious attention in consequence of their having realised the wider field which lies before them. This statement will be well borne out by the accompanying illustration. After all, it is getting somewhat late in the day to dilate about that department of their productions which is concerned with real utility. In this the firm has more than justified itself. There is, however, a definitely new departure in what is to be known as their

make them feel that such articles can be British made and still give satisfaction. Finally, I will refer briefly to a very comforting article for the cold nights, the stoneware footwarmer. The old "D" shape is "still running," and the "Bungalow" is a newer line which has the merit of lying flat; and carriage, motor, and muff warmers are not outside their province.

Young & Hodgson, Ltd., glass, china and earthenware importers and agents, whose head offices are at 1, Britannia-street, King's Cross, W.C., have, since we last noticed their movements in these notes, opened an additional showroom at 95, Hatton-garden, E.C., and upon this nice, compact and useful acquisition, which is being superintended by Mr. Hodgson, we congratulate them, for the move has brought them, so to speak, within the "inner circle," and is bound to be a great convenience to a considerable section of buyers. It must be understood, however, that this additional showroom will in no way affect the retention of their King's Cross premises, which are quite as necessary as ever for the control and warehousing of their extensive importations. We have

from time to time in the past called attention to this firm's operations in order to interest our readers in a class of commodity which, after all, plays a very important function in the business of the average pottery dealer, viz., moderately-priced pottery and glassware, both useful and ornamental. The foreign-produced article cannot and must not be neglected simply because it is foreign. Such an attitude would be un-British; if it presents characteristics which are in any sense commendable, let us acknowledge them by all means. Besides, whilst there is an acknowledged demand for the imported article, it is clearly the duty of a trade journal to give it as much prominence as its claims appear to warrant. One must at least admit that many of the articles which Young & Hodgson, Ltd., are showing possess certain peculiar and distinguishing qualities which commend them as being distinctly advantageous lines for the medium class dealer to handle. The writer has always a secret and unique satisfaction in calling attention to evidences of perfection in British art and in giving prominence to the perfected skill of the British craftsman wherever it is discernible; at the same time he recognises, in his wanderings, that the English manufacturer has, as yet, failed from certain standpoints to meet some portion of the competition of his Continental friends: in one direction this is clearly so, and that is, the consideration of price. It is not within my province to express an opinion upon this subject, but simply to state what appears to be the fact. Some of the lines at present on show in the showrooms of Young & Hodgson, Ltd., would appear to be marvellously priced, and amongst these I have in mind particularly a range of dessert ware in Bavarian china, decorated with fruit and flower subjects, and finished off with a gold edge. Without offering any observations whatever as to the merits or the demerits of the process by which such a decoration is accomplished, one must at least concede that it cannot be accused of being skimmed: it is quite effective in its finished result, and for a definite market will undoubtedly set up a most serious competition—or rather it will not, because it will be beyond the region of competition as things are at present. This dessert ware is to be had in set quantities with round, oval or square dishes, though, if desired, the dessert plates and dishes can be purchased separately. Another branch in which Young & Hodgson, Ltd., appear to have special facilities is in the direction of trinket sets, which can be had in cases containing an assortment of twenty sets, each of which is different in shape or design. Cruets triple trays, cheese dishes, moustache cups and saucers and similar lines are to be seen in wide variety, and in cheap blown, lithographed and gilt vases cases can be made up to practically any value. We would call special attention to a line of delicate figures representing Salome Dancers. This is one of the newest lines on show, and we illustrate a couple of them, one upright and the other reclining. These figures are supplied in pairs. It will be seen from the illustrations that the modelling has been excellently carried out, and the same may be said in regard to the colouring. At the price at which these figures are offered—well, one can only wonder how it is done. There is a further range of very minute doll figures, a revival, the writer thinks, of a type of article produced at a very much higher price, twenty years ago. The detail is most cleverly portrayed, especially is this so in the delicate lace embroidery. However these pieces are produced, they are triumphs. The showroom further contains specimens of all sorts of quickly marketable lines, a reserve stock of the principal and most saleable of which is kept by Young & Hodgson, Ltd., at their King's Cross depôt, which is ably supervised by Mr. Benjamin.



[*Photo. by "The Pottery Gazette."*

YOUNG & HODGSON, LTD.: SMALL "SALOME" FIGURES.

Markt & Co. (London), Ltd., 98 and 100, Clerkenwell-road, E.C., have some excellent lines in glasswares on show in their spacious and conveniently situated rooms near to Farringdon-street Railway Station. Amongst the newest and most interesting of these is that series known as the "Nucut," emanating from the Imperial Glass Co., Ohio. This is, as a matter of fact, a distinctly new production in glassware, and it claims to constitute one of the closest imitations to cut glass ever attempted by mould manipulation. It is, indeed, perfectly correct that for brilliance and scintillating effect the "Nucut" glassware does to a degree resemble heavily cut crystal, from the enjoyment of which a great section of the public is permanently debarred on account of its relative expensiveness. No one would attempt for a moment to argue that the genuine hand-cut article has not always distinguishing characteristics which are the hall-mark of manual dexterity, and placing it on a plane, which, from some points of view, is quite unassailable, but the privilege of possessing a suite of real hand-cut crystal is, and must always be, reserved to a select few. The "Nucut" suite, on the other hand, will provide the householder of moderate means with the opportunity of securing a really beautiful effect in table-glass, combined with a degree of taste and refinement which is certainly

closely remindful of genuine hand-worked crystal. The new production is made in a variety of shapes and sizes, each article of which is definitely impressed with its characteristic name "Nucut." For hotels and good-class boarding houses it can be recommended to form a asteful, and at the same time economical, complement. We have little doubt that Markt & Co. have the control here of a line which should be a very profitable one, and we have not the slightest doubt that they will handle it with their accustomed thoroughness. One of the principal features of the new series is a charmingly varied selection of salad bowls and shallow dishes, whilst other articles exerting a peculiar interest are such accessory lines as an oval cucumber tray, footed sugar, and several shapes in celery vases and small sweets dishes. A variety of assortments are procurable, the barrels being forwarded carriage paid to any address in the United Kingdom. A further point to note is that loose stock is also kept by Markt & Co. in London, so that individual articles can be repeated as desired. Show cards and other publicity facilities accompany each case. Markt & Co. have also quite a number of other interesting lines in glasswares, amongst which is a very cheap assortment in coloured glass suitable for bazaars, consisting of 10 dozen assorted articles and colours. It is quite a good line for a cheap Christmas trade. A 20 dozen barrel assortment of similar lines, but in smaller articles, can also be had.



"Nucut" Glassware: Markt & Co. (London), Ltd.



Richard Green & Sons, 95, Hatton-garden, E.C., are direct importers of china, earthenware and glass who have built up an important connection in a number of special lines of which they have control. It is always specially interesting to look round the showrooms of the importers, because it is here that one is able to see in a compact and comprehensive way the extent of a class of trade with which the home manufacturer is either unable or prefers not to handle. In glassware Richard Green & Sons have some specially interesting lines, and hold a large stock of cases in London ready for immediate delivery, comprising every variety of tumbler, wineglass, goblet, jug, carafe and ups and flower tube. Many of their cases contain useful assortments; for instance, cases of plain crystal containing ports, sherries, liqueurs, clarets, and ponies; other cases, similarly assorted, of etched glass, cases of carafes and ups or jugs, plain and cut, well assorted in small case lots, are lines which will appeal to the most cautious buyers. Cut glass suites are shown by this firm packed in two case lots, to suit dealers who require only tumblers and wines, or full suites. Richard Green & Sons offer, indeed, almost everything in glassware suitable for the table, and they stock a large variety of glasses suitable to dealers who cater for the licensed victuallers. In addition to glassware they have a fair range of Staffordshire and other pottery at distinctly favourable prices. When we last noticed this firm in our Buyers' Notes, they were situated at 31, St. Bride-street, Ludgate-circus, E.C.; it is only quite recently that they have removed into the more suitable premises where they are now located.



Glassware for Licensed Victuallers: Richard Green & Sons.

POTTERY AND GLASS AT THE IDEAL HOME EXHIBITION.

(BY OUR OWN REPRESENTATIVE.)

THE Ideal Home Exhibition was held at Olympia from Oct. 9 to Oct. 25. The amount of patronage seeured both from exhibitors and visitors should reassure those who fear that English home life is rapidly decaying. There are evidently plenty of people who still take suffieient interest in their homes to desire to make them both eomfortable and beautiful.

Of course, no home can approach the ideal without the aid of useful and decorative pottery and glass; so it is not surprising that most of the furnishing exhibits included a greater or less quantity of these wares.

harmony with a eentral bunch of wall-flowers; and on a fourth table the plates and glasses had gilt rims, while the flowers were gay carnations. The upper shelf of the large eentral stand was occupied by a quantity of Doulton Rouge Flambé ware, while below on one side was a seleetion of vases including some superb specimens of Royal Worcester and on the other were a number of dainty reproductions of china of the Ming period in famille noire, famille rose, and famille verte, supplied by R. H. & S. L. Plant. A notable feature of this eentral stand was a range of vases, bowls, &e., specially made for Waring & Gillow, Ltd., based on Chinese models of the best periods or on old English styles of the time when inspiration was being drawn direet from Chinese sourees. These specimens, made in England and decorated abroad, are admirable alike in design and execution. On a small flanking table



STAND OF WARING & GILLOW, LTD., AT THE IDEAL HOME EXHIBITION.

WARING & GILLOW, LTD., beside showing some ehoice old-fashioned table glass in their Tudor dining room and appropriate blue and white vases in their Chinese room, also devoted a whole stand to their ehina and glass department, with most excellent results. The capable head of the department, Mr. S. G. Grey, utilised the spaee at his disposal for displaying a varied eollection of high-elass wares. At the eorners of the stand were placed four round tables, eaeh laid as if for a meal, with a harmonious eolour combination of pottery and glass. That in the foreground of the illustration, for instance, had a centre vase eontaining orehids, and the dessert plates had a heliotrope border. Associated with suitable eutlery and napery the wares thus shown appeared to the greatest advantage. At another eorner the colour scheme was eornflower blue; at another orange and green in was to be seen some excellent table ware, an "old Chantilly" style being partieularly attraetive. With this was associated a strong Swedish granite ware with a striking, if somewhat erude, sponged deeoration. On the eorresponding table on the opposite side were shown art vases in Egyptian and Italian majoliea styles, as well as the "Radio" heat-retaining vegetable dish, more table ware, ineluding the quaint old Spode "Plymouth" pattern, and some toilet ware, the "Tudor" shape possessing a partieularly eomfortable rotundity of outline. There remains to be mentioned the glassware, which was arranged on two large tables, one at either end of the stand. The selection eomprised some of very pure, heavy metal fashioned into vases, bowls, &e., lavishly eut and polished to a scintillating brillianee. A word of commendation must be bestowed on the gaily-figured lamp-

shades, which formed really valuable accessories. One or two glass ewers and basins were shown, as also were some fine goblets of antique shape, and a variety of richly cut and tinted wine glasses. The exhibit met with well-deserved success, and fully established the qualifications of china and glass for constituting a department on their own basis.

The only other exclusively ceramic exhibit was that of the COLDRUM POTTERY, which comprised vases, flower pots, bowls, &c., of a distinctly "arty" character. Some plain red garden pottery was notable for its graceful contours.

Among the furnishing exhibits DERRY & TOMS had a few beautiful figures in the old Dresden style, and some choice "Longton Hall" pattern china tableware. WILLIAM SPRIGGS & CO., LTD., were particularly happy in the selection of toilet sets for display with their bedroom suites, and in consequence were able to display several labels with the magic word "Sold." ARDING & HOBBS, LTD., had furnished a model house in a highly tasteful manner, and the necessary crockery was of an appropriate description. A small selection of Mr. HOWSON TAYLOR'S well-known Ruskin Pottery was shown at an ironmongery stall. GODFREY GILES & Co. displayed some brilliant glass table ware in a well furnished dining room. A. B. DANIELL & SONS included a few specimens of old Chinese pottery in their exhibit. GRASSES, EVERARD & Co., showed examples of cut crystals and coloured glasses in antique and modern shapes, from a Bohemian glass-works; also Delft pottery in the original colours, from the Delft Potteries of Joost Thooft & Labouchere.

A Russian village was the chief side show, and a very pretty one it was, though the cottages could hardly be regarded as "Ideal Homes," being each and all fitted up inside as stalls for the retail sale of the products of native industries. One of them was devoted to pottery, the ware being mostly a heavy faïence decorated with geometric patterns in rather crude colourings, varying somewhat according to the district of origin, but all showing unmistakable signs of Oriental influence.

A CALGARY CROCKERY DEPARTMENT.

A LARGE new department store was recently opened at the corner of Seventh-avenue and First-street West, Calgary, by the Hudson's Bay Co. The building is six storeys high, and is notable for convenience of arrangement, serviceable appointments, and tasteful decorations throughout. It contains all the usual departments, including one for crockery and glass. The crockery department, shown in the accompanying illustration, is on the third floor, and occupies a space of 140 by 75 ft., running from the front to the back of the building, with the hardware and grocery departments on either side. All lines of high-class china are carried, including Royal Crown Derby, Copeland's Spode, Royal Worcester, Dresden, and the leading French lines. The cut glass room occupies a space of 16 by 16 ft., with mirror backs and shelves. The population of the city and district is rapidly increasing in numbers and wealth, and affords a good market for the goods handled by this department.



CROCKERY DEPARTMENT IN THE HUDSON BAY CO.'S NEW STORE AT CALGARY.

The Earthenware Import of the Gold Coast was valued at £16,281 during 1912, showing a decrease of £1,617.

Fancy Glass Biscuit Jars are dutiable on importation into the Australian Commonwealth, according to a recent decision, at 35 per cent. ad val., under the general tariff, and 25 per cent. ad val. under the preferential tariff.

SOME NORTH WALES CHINA SHOPS.

(By a "Pottery Gazette" Special Commissioner.)

(*Concluded from page* 1155.)

NOT the least important by far of the North Wales holiday resorts is

LLANDUDNO.

During the holiday season this resort is, unquestionably, extremely popular, largely owing to a much accelerated season train service and cheap bookings from practically every part of the kingdom, the result of which is a wonderful influx of season visitors. Maintaining, as it does, a position midway between Rhyl on the one hand—or shall we say Prestatyn, where the North Wales coast really begins?—and Anglesey on the other, Llandudno finds much favour with the holiday-seeker. Not only has the resort much to commend it by reason of its central situation considered from a touring point of view, but probably in no part of the North Wales coast is gaiety and enjoyment witnessed during the season to such advantage, and with the added benefits of bright



F. Holland, Llandudno: A well-preserved Original Mason Service.

sunshine and a warm air tempered by gentle breezes, there is little wonder that Llandudno exerts such real attractions to jaded townsfolk. More than once have I myself chosen Llandudno in order to mix with a pleasure-seeking throng, and one can hardly enter the resort without an inclination to do so, but my feeling of exhilaration was, on the present visit, a trifle sobered by the recognition that I had at least one serious call to make, and that was at the well-known

Holland's China and Antique Galleries,

situated at 91, Central Mostyn-street. It may be that the very environment of the resort at the time of my visit—it must be remembered that some time has elapsed before my notes got into print—led to my being somewhat apathetic to embrace my duty on this particular morning, and consequently it was not exactly with the flush of ardour that I approached the shop, and, as my custom is, looked in through the front window as though I had come to buy up the place. But in whatever spirit I approached my task, I was not long in getting imbued with enthusiasm at what I saw, so much so, that I had not even time when I had finished to go down to the beach. I have spent many happy hours in the retail shops in the capacity of a commissioner to this Journal, but I must admit that few inspections have, as yet, given me more to think about in the same relative time. My interest was first aroused by a remarkable curiosity displayed in the window in the shape of a somewhat tattered, but clearly decipherable, postal notice issued at the Manchester Post Office as far back as the year 1721, and—so at least we might think with our present enjoyment of links and inter-connections in postal facilities—coolly intimating that the post goes out to London, or to any of the towns in or near the road to London, three times a week, viz., Mondays, Wednesdays and Saturdays, at nine o'clock in the morning; and to Warrington, Chester, Worcester, Bristol, Ireland, Liverpoole (spelt with a final "e"), Preston, Lancaster, Kendal, Carlisle, Dumfries, &c., on Mondays, Thursdays and Saturdays, at seven o'clock in the morning; but it will be best to bring the letters the night before because the "acc-counts" and "baggs" are usually made up overnight. As to incoming mails, these are also due three times a week. An interesting relic indeed in these days of motor cars, aeroplanes, express trains, and telegraphs! One has almost forgotten that such a thing as stage coaches ever existed. Amongst the other treasures of the past displayed for the benefit of the public in one of the front windows was an original Land Tax receipt dated Dec. 12, 1716. With the conviction that this sort of thing was only a mild indication of what was to be seen inside, I walked into the shop, and, producing my card, was speedily brought into touch with the proprietor, Mr. Frederick Holland, who, although it was a busy morning—Saturday, of all days—gave himself up to me unreservedly for quite an hour and a half, and was extremely kind in showing me right over the place, and in allowing me to take notes of everything which interested me.

In the first place, I ought to mention that this business is that previously owned by J. Wiley & Son, and to lead up to the present as briefly as I am able, Mr. Wiley, sen., retired from business some fifteen years ago at a riper age than is allotted in all to most men, and, as a matter of fact, died only this year at the grand old age of 90. It was upon Mr. Wiley, senr.'s, retirement that Mr. Holland, the present proprietor, who had then been in Wiley & Son's employ for about ten years, decided to go into business on his own account, and took premises in Lloyd-street, but on the death of Mr. Wiley, jun., about five years ago, Mr. Wiley, sen., offered Mr. Holland the business. The offer was accepted, and Mr. Holland closed his Lloyd-street establishment, and has since thrown all the energies of which he is capable into the Mostyn-street concern. Upon his occupation of the old premises to which he was so accustomed, he immediately thought it advisable to commence upon a work of reconstruction. The plan he had formulated included the erection of a large new show room at the back for modern goods, and the dwelling-house, which was part and parcel of the premises, was taken in for the conversion of antique show rooms, or to be more correct "galleries." This antique department had been initiated some ten years earlier, and Mr. Holland thought that the prospects for it were so promising that it would clearly be worth while to give it every encouragement. That his judgment was well founded I shall endeavour to illustrate later.

As to that section of the galleries which is stocked with a remarkably choice selection of the best makes in modern china, earthenware and glass I shall say but little, though it would well deserve all the space which the Editors might care to give it. In brief, it contains a

most interesting and valuable stock, which not only captivates the holiday-maker locally hailed, but even the foreigner, and in conversation with the proprietor I learned, though I am not expected to make the statement, that in one single week last season he was commissioned to make up no less than twelve consignments for foreign countries, representing almost every direction one might take overseas.

From the third storey down to the cellar—and I have seen the whole place over—the various rooms are well fitted for the reception of china, earthenware and glass stocks, and there is never less than a stock representing at least 100 dinner and tea sets and 100 toilet sets from which to choose, and, ordered in the morning, any one of which can be delivered in the afternoon. A wonderfully comprehensive assortment of loose glass is included in the complement of the establishment, and besides what is to be seen at 91, Central Mostyn-street, there is an additional large warehouse further down the street for the accommodation of cases. Mr. Holland is also the Llandudno agent for the celebrated Goss Heraldic wares. One might talk at great length with regard to many of the excellent modern productions contained in Holland's Galleries, but I shall not give myself that pleasure just now, because I wish to refer more particularly to some of the wonderful lines which I was allowed to see in the antique department.

The first thing that attracted my attention on getting amongst the "curios" was a handsome old Spode china dinner service, every piece of which is in perfect condition. It was of a rich red and gold Japan design, and its present value is nothing short of £250. A real old Mason service of 130 pieces, every piece of which bears the impressed "Mason" mark, and the long backstamp "Patent Ironstone China," was another triumph of preservation, and the accompanying reproduction of a snapshot will probably prove this statement to be not exaggerated. A fine old Worcester tea and coffee service, script marked, date fixed at about 1820, was another service in excellent condition, and a Spode earthenware dinner service of the blue "Arcadian" pattern, marked "Spode" in the clay, the engravings of this pattern having, it is understood, been destroyed since the year 1800, or thereabouts, was also on show, and bears its age in a marvellous way. An old Mason vase, of Chinese inspiration as regards design, and which surely cannot be less than 90 years old, is a most noble piece of potting, standing 50 in. in height, and attracting everyone who comes within its range. A genuine old Worcester dessert service for 24 persons, decorated in salmon and gold, and each piece of which bears the impressed mark, an old Rockingham dessert service, perfect in every respect, and a Crown Derby dessert service of the very best period (1788), with the puce mark and jewelled crown, were other noteworthy features of the galleries at the time of my visit. A few days before Mr. Holland had, I understood, sold a Rockingham dessert service which was one of a pair made for the late Prince Consort to choose from, and a Crown Derby dinner set of the design made for George III. to the same customer.

There were many other startlingly fine examples of antiquity in the rooms, not merely in the direction of pottery, in which I was specially interested, but also in engravings, rare books and illuminated manuscripts. But a treasure on which Mr. Holland sets specially great store is what is considered to be an original portrait painting of that immortal bard Shakespeare. It was discovered whilst Mr. Holland was on a visit to a Liverpool friend some years ago. It is painted on a panel 5½ in. by ¾ in., and is signed "Jo' Taylor." Now Joseph Taylor was a co-worker, or rather co-actor, with Shakespeare, and it is almost universally conceded that the portrait is genuine. This portrait was exhibited at the great Shakespearean Exhibition ("Shakespeare's England"), Earl's Court, from May to October, 1912, and is now on loan at Stratford-on-Avon.

Whilst Mr. Holland merely looks upon his antique department as a side-line, one must, in being shown over his rooms, form the view that it must be a very profitable and interesting side-line, and another reflection which one is bound to make is the time and thought which Mr. Holland, who is as yet quite a young man, and who spent his early years in a humble capacity in some of the Fenton factories, must have devoted to his work in order to learn so much about the merits and the bonâ-fides of the old masters. Questioning him as to this, I was not surprised to learn that from his earliest days he has always taken a keen interest in the museums, and from the beginning made up his mind that some day he would turn the knowledge so obtained to good advantage. That he has succeeded in doing so is indisputable.

Finally, having himself learned so much from the local North Staffordshire Museums, it is gratifying to know that Mr. Holland has not forgotten the source from which a great deal of his knowledge has been culled, and one notices with satisfaction that at the present moment the Hanley Museum boasts of several valuable loans, to which the general public are indebted to Mr. Holland, of Llandudno.

COLWYN BAY.

Within easy reach of Llandudno, either by rail or tram, Colwyn Bay has peculiar attractions to offer, and as a season resort is eagerly sought after, but, unlike Llandudno, it may be regarded also as a residential centre, and is consequently by no means deserted in the winter months when thousands of holiday-makers have left. One has not far to walk from the station to be brought face to face with a furnishing establishment, presenting quite an imposing frontage, and one very important window of which is arrayed with as fine a selection of china as one might wish to see; so choice, in fact, as to be almost unique for a seaside place, and capable of vieing with not a few of the proud concerns of the metropolis. I refer to

Allen & Sons,

Station-road. Our photograph of the exterior will show it to be of a high-class and extremely attractive type. Unfortunately vertical space will not allow us to show the whole of the Elizabethan structure, but this can perhaps be imagined. Allen & Sons originally opened out, I believe, at Leek, in Staffordshire, in 1869, and migrated to Colwyn Bay ten years later, and though they are essentially a complete house furnishing concern, probably the principal one in the town of Colwyn Bay to-day, and in their capacity as cabinet-makers possess up-to-date machinery and make the major portion of what they have to sell, they have had a china department ever since they came to Colwyn Bay, and this has come to be regarded as quite an important feature of their business. There is no gainsaying that it is a most attractive showing, and I was most agreeably impressed with what I saw of it. Miss Allen takes the entire charge of this department, and she is an enterprising lady who has not given her whole time and attention to the china retail trade for nothing. She knows evidently just what to buy, and how to buy, and as for display, one has everything one could wish for here. The windows are fitted with the most approved plate-glass shelves, whilst inside the shop the fittings and cases are all of the best and most up-to-date type. The premises are electrically lighted throughout, the show rooms linoleumed and carpeted, and in every way is the place well-appointed and calculated

to appeal to the very best clientèle. As for the goods, there was hardly a good-class house which was not represented in the stock, Copeland, Wedgwood, Minton, Crown Derby, Worcester, Doulton and many other makes of similar character being shown.

The china show room is, fortunately, on the ground floor, and it is supplemented by three large warehouses in the basement for holding stock. A magnificent case in the centre front of the shop was choicely laden with works of art, and for a display of fine ornamentals it was really unique. The window contained a representation of the best of everything, and at the time of my visit crowds of visitors were eagerly and longingly inspecting the whole display. If I had advised Allen & Sons beforehand of my intended visit, which I had not, I might have thought that the display had been specially made in honour of my visit. A fine display of cut-glass scintillated in the sunlight, and helped to give brilliance to the glazes of the remarkable selection of pottery in close proximity to it. A capital show of Worcester pastoral paintings, old Spode



ALLEN & SONS, COLWYN BAY.

prints, Lancastrian lustred wares, mother-of-pearl glass epergnes, Bretby Art "Delhi" ware, Royal Doulton Welsh subjects, and some remarkably fine after-dinner coffees and sancers and trinket sets, as well as many other similarly fine specimens of pottery, combined to make up such an attractive display as one could not wish or hope to see improved.

The furnishing branch of the business is regulated by Mr. Edward Allen, who is Chairman of the Colwyn Bay Council, and Mr. E. H. Allen, his brother. Four floors are well stocked with their products as cabinet-makers, and with this side an important toiletware department is combined. As indicating their progressiveness, I have only to mention that the firm have their own motor delivery vans, by which they are able to deliver their goods as far away as Rhyl, Prestatyn, Denbigh, Ruthin and along that valley twice a week, as well as to Penmaenmawr, Llanfairfechan and along the coast in that direction. It was indeed interesting to me to meet with such a live firm in so remote a part of the kingdom as North Wales, and Allen & Sons are, I think, entitled to a word of congratulation on the results they have achieved.

Passing along up the Station-road and on to the Abergele-road, I looked up the shop of

J. BOARDMAN & SON,

Emlyn House, and found Mr. Alfred Boardman, the proprietor, obsessed with business, but, withal, not to the exclusion of meeting me pleasantly, and assisting me to make my notes of the town's china shops as complete as possible by giving me all the particulars I sought in relation to himself and his own undertaking. I learned that Mr. Boardman started out in Manchester some twenty years ago. At that time his knowledge of pottery was barren, and he had to set to work to discover its mysteries for himself. After being in Manchester about five years he worked his way into a wholesale trade, and in this was quite successful, but unfortunately the city life did not suit his health, and after a successful Manchester career he decided some eight years ago to get to Colwyn, and try fresh fields. Starting in quite a small way at the premises he at present occupies, he has gradually and surely improved his connection, and has lived to disprove the, no doubt kind warning that was administered to him by one of the North Staffordshire manufacturers upon his advent into Colwyn, that he had gone there to sink all his capital. Every year he has succeeded in increasing not only the quantity but the quality of his business.

Mr. Boardman has certain definite and fixed principles which he constantly keeps in front of him. In the first place, he does everything possible to foster a good cash trade and his instructions to his assistants are that every customer must have a perfect article at the lowest consistent price. A printed notice in the shop was firm but polite in its significance, "Please do not ask for credit, as a refusal offends." The proprietor is of the opinion that a good article at the lowest possible cash price is likely to give more enduring satisfaction than a less satisfactory one on credit, and he considers it impossible to give credit and at the same time the best possible value for money.

The photograph we reproduce of J. Boardman & Son's shop will show that it is double-fronted, and that both windows are admirably stocked. Unfortunately it is impossible for a mere photograph to convey an idea as to some of the choice lines contained therein, and our word must, therefore, be taken for it that it was specially attractive.

The interior of the shop quite fortified the excellent window display, and I was extremely interested in inspecting a considerable portion of the stock. The proprietor has something to offer suitable for everyone, and

the visitor is well catered for during the season. The season trade at this establishment would appear to be a very important factor. Fortunately, the present season has been an extremely good one. In fact, everyone upon whom I called in North Wales early in September expressed satisfaction at the results of the season, and it is always so much pleasanter to call upon the shopkeeper, even in my capacity, when he has not got the grumbles.

There was quite a bright and lively appearance about the whole of Mr. Boardman's stock, and whether it was in the English staples or the foreign novelties, this was equally apparent. He has the sole agency for the Nora Také, Satsuma and Royal Bonn novelties, and these form a very pleasing line for a souvenir trade. In the last-named the Louis XVI. pattern in dark blue would appear to be a very saleable line, whilst the bulb bowls of this factory should also prove popular. Although Mr. Boardman had an extraordinarily fine assortment of fancies, the same can well be said of his set lines, and amongst some very good things I noticed in the shop were Weatherby's Canton "Belmont" dinner ware, Allerton's green "Ascot" bone china tea and breakfast ware and earthenware dinner ware to match, "Ye olde Foley" ware, and Alfred Meakin's blue band, gold line, and hair-brown festoon designs. Wilkinson's, Burgess and Leigh's, and Davisons' (Bleakhill Works) productions were also well shown. In glassware there was an equally good range. In the cheaper glassware Davisons, Gateshead, were prominent, and their 1911 and 1913 designs were well worthy of notice. There was a fair showing of toilet ware, and I ventured to question Mr. Boardman as to whether he considered the china dealer was losing ground in this respect. He was of the opinion that, providing it is well shown and at the right price, the china dealer can still do his share in the direction of bedroom ware.



J. Boardman & Son, Colwyn Bay.

Mr. Boardman, since his occupation of the shop eight years ago, has effected a number of important improvements. A new window has been put in, in order to secure more effective display, and further improvements are conjectured in the direction of improved fixtures to replace shelving. He is fortunate in having a side passage through which his packages can be run to a warehouse at the back, and also to the cellar.

The proprietor has no reason to be dissatisfied with the choice of his situation. He is well placed on the main road, and he lays claim to a fair share of the china trade of the resort. He has certainly justified his stay in the town, and deserves to be wished all the success which may await him in the future.

Thus concluded my brief series of notes in regard to the retail shops of North Wales. The tour, although short, was an extremely interesting one, and well repaid my visit.

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THE members of the English Ceramic Society were well repaid on Saturday evening, Oct. 18, for patiently waiting for the deferred visit of Sir Henry Cunynghame, late Assistant-Secretary to the Home Office, who consented to stand as the Society's President for the 1913-14 Session. To mark the event it was decided by the Committee that the meeting should be an open one, and for the first time in the Society's history ladies were invited. The meeting was held in the Assembly Room of the North Stafford Hotel, Stoke-on-Trent, and there was a crowded gathering.

Mr. C. W. Thomas, Stourbridge, Past-President, presided, and introduced Sir Henry in a suitable speech, remarking how relieved he felt of responsibility in handing over the reins of office to his distinguished successor. It was somewhat unfortunate that they were unable to have the meeting in the new college, but the pleasure of meeting there would be none the less because of its being deferred a little longer. He extended to Sir Henry on behalf of the members a very hearty invitation upon his acceptance of the Presidency. They would always be most happy to meet him at the Society's meetings, and as for the present address, he could certainly assure him of a most attentive hearing.

Sir Henry Cunynghame chose for his Presidential address

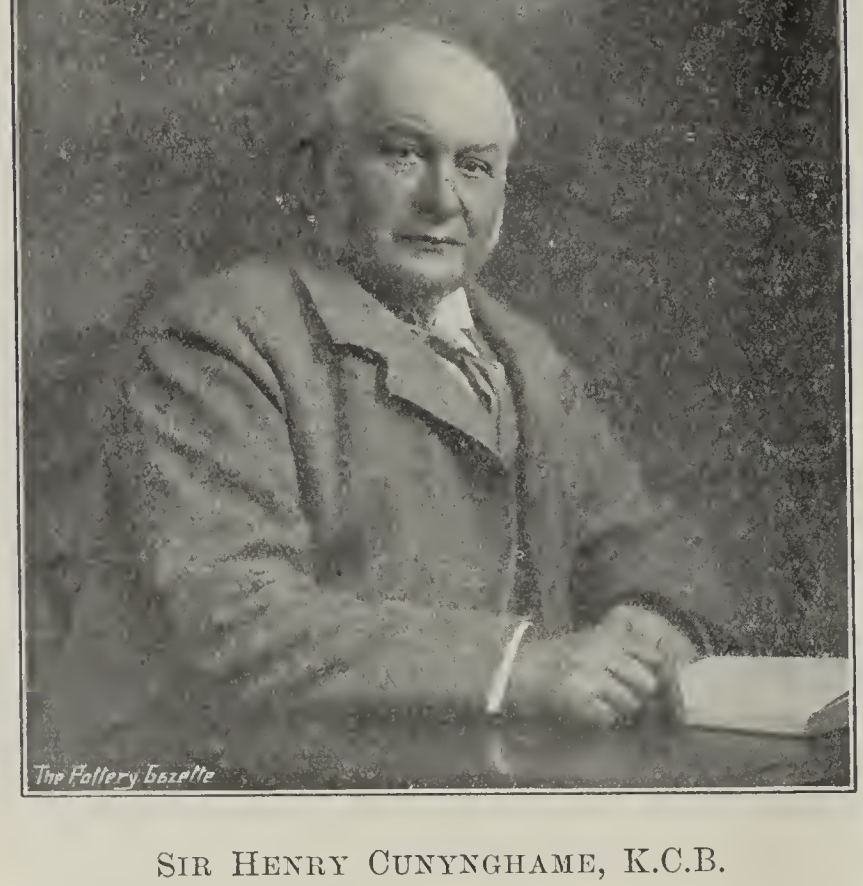
"Art and Commonsense."

He said he was sure they must all feel in their minds that a lot of nonsense was often talked about art. It was looked upon as a marvellous thing which nobody could understand, and yet people went about pretending to know quite a great deal about it, and gave other people the impression that they were exceedingly clever. There was a sort of air of the clever young man about a great many people who elected to speak on the subject of art. He would venture to say that in this respect the works of Ruskin, great as they were, had done an incalculable amount of harm. Ruskin was an orator, and on his own admission there was hardly a place in his works where there was not something contained which would contradict something he had said somewhere else. Quite a great deal

of his work was mere reiteration. But as for art commonsense, he was everything that an art critic should be, except to have a real solid basis of theory, which he never had. Whilst Ruskin admired Turner on the one hand, what he had to say about realism would entirely destroy Turner on the other. What the speaker did want to emphasise was that art, after all, was commonsense, and if they wanted to see how commonsense it could be, they had only to take up the discourses of Sir Joshua Reynolds on art, which anyone could get from a lending library. What a commonsense view that most pathetic artist took of art! He (the speaker) did not know of anything better than those discourses to bring one down from the clouds and into the realm of commonsense on the subject of art.

Three Main Phases of Art.

Now the truth was that a work of art appeared to appeal to three different sides of our nature. It was generally for one of these reasons that one looked longingly at a work of art. Firstly, it might appeal to the sensuous



Sir Henry Cunynghame, K.C.B.

part of our being in its beauty of form and colour. Colour without form could even be beautiful. A simple blot of red or green would often appeal to the senses in the same way as a lovely taste in the mouth. But it was not art, any more than a mere taste of sugar could be regarded as cookery. Art required to do something more than give one a pleasant sensation. Secondly, then, art must appeal to the emotional side of our nature; it must have the effect of raising the emotions. And if that was true, they would see that certain consequences followed upon the admission of its truth; art must also appeal to the intellectual part of our nature. Art, then, exerted itself in the three ways described: (1) Through the senses, (2) through the emotions, and (3) through the intellect.

Now he would, first of all, cite an instance of a work of art which merely appealed to the sensuous in nature. He referred to the splashed vase. The potter took up his vase, and some copper on the one hand and some chromium on the other. The two were mixed, the vase dipped, put into the furnace, heated up, and finally brought out. Meantime, the potter with some anxiety wondered what he was going to get. When the vase came out it was with a beautiful effect, which people called "Sang de bœuf." Everyone said, "My eye! What a wonderful thing." But the late Mr. Solon would have said, "That is not art at all. It is chance. To me art must be more sensible than that. You must bring in the emotions and the intellect."

Secondly, they would take a work of art which brought in the emotions, but which left out the other two essentials. Probably the culminating subject for an emotional work of art was a beautiful picture of the Madonna and Child. There was probably nothing finer from an emotional point of view, because there one saw united the beautiful idea of maternity in womanhood and simplicity of childhood, the feeling of the mother for the child and the child for the mother, and withal, a representation usually of the most beautiful woman and the most beautiful child. The modern French way of representing this subject would be to depict a rough peasant woman with a wretched little urchin in her arms, and the French artist would say "That is realism." But the speaker would say that if they wanted sordid realism of that type, if they wanted to see the pale, emaciated mother with the dirty little brat to her breast, they could see that unfortunately for themselves about the streets. They wanted something to raise their emotions, and in order to accomplish that it was necessary that every subject should, as far as it possibly could, be presented in its noblest aspect.

Thirdly, they would take a work of art of a purely intellectual type. For this nothing perhaps could be more suitable than a historical picture. As an illustration they might take such a subject as Cromwell looking at the dead body of Charles I.—an incident which very possibly occurred; historians doubted it, but at all events the subject was a fine one. The idea presented was that of a rugged sort of chap looking down upon the face of the man he had executed, and wondering whether, after all, he might not have made a mistake. Such a picture appealed directly to the intellectual side of our nature, though possibly to the emotional side as well in a certain degree.

All Good Art is Legitimate.

Here, then, were three ways in which art could make its appeal to human nature. Now he (the speaker) wanted particularly to say that all was legitimate. He recognised that there was a tendency to point out that only one kind of art was legitimate, and all the other was nonsense. But what would be thought of a man who advanced this sort of idea in literature? All literature was legitimate if it was only good, and all art was legitimate if it was only well carried out. There was no style of art that could not be made great and noble if they used great and noble means of doing it.

This brought the speaker to an important point. It appeared to him that the best definition that one could give of art was that it was a language. The art of potting, the art of painting, or any other type of art was, in reality, a language which a certain set of people employed for talking to others, and to make their ideas known. Some did this by means of writing, and if they wanted to arouse the idea of a beautiful landscape they would undertake to do it by means of a beautiful descriptive. By a play on words they succeeded, often in a remarkable way, in bringing up before the mind a very realistic portraiture. The artist, whether in colour or black and white, accomplished the same thing, but in another way. Whatever the kind of language employed the idea was the same, to arouse in the mind, either by appealing to the sensuous, the emotional or the intellectual propensities, an idea which it was desired to convey.

Now if they were agreed that the analogy was a fair one—and he thought it was perfectly reasonable to do so—they must next concede that the language they employed to communicate their ideas to others must be intelligible. It would not be reasonable to speak Japanese to a man who merely understood English. It was necessary, therefore, for the artist to shape his art according to the taste and the knowledge and the feelings of the people whom he sought to address. It was no use writing a book to people in a foreign language. Art differed from language somewhat in this respect, that it was a more universal language, more like a language that was spoken before the Tower of Babel, for instance. But, after all, a Frenchman looked at a picture with the eyes of a Frenchman, and it was no use presenting to a Frenchman something which he did not know of in French history. The Frenchman was sure to like French inspiration the best.

It seemed to the speaker that what the artist had to take care to ensure was that the subject should be interesting, and the language grammatically correct and good, in other words, that the design should be good design and the language good language. It was here that the school of art came in. It was, of course, impossible for the art master to make an artist of a man who had no art in him. Just as the grammatical master would say, "I cannot make you a poet, but I can at least teach you to write good grammar; learn to know instinctively what is correct; learn to put your adjectives and verbs and other parts of speech in the right place; learn your trade thoroughly, and then go and have a try"; so it was with the art student. It was impossible to know how much artistic talent any particular student might have. God had either given him that or had not given it to him. Everyone had a germ of art; not one in ten thousand had a great deal of it. But those who had not a great deal of it could at least cultivate what they had to such a high pitch that it became exceedingly useful. The young man must not imagine that because he was not a Turner he was no use in the realm of art. That would be absurd. He must be content with what God had given him in a closed purse. It was impossible to see what was in the purse until it was opened. and everyone was obliged to open it for himself. Whether the young man had dreams of becoming an actor, a dramatist, a musician, a painter or a statesman, that was the right spirit in which he should approach what lay before him.

Four Characteristics of Good Art.

But to go a little further. What were the characteristics that a good work of art should possess? Well, as far as he (the speaker) could see, first of all the subject must be interesting; secondly, attention must be carefully paid to the composition; thirdly, there must be a good arrangement of colour—he said this particularly because he was speaking as the President of the English Ceramic Society; and, lastly, there must be in it an element of poetry. He would deal briefly with these four heads in order to illustrate more clearly what he meant. He would throw on the screen a series of slides illustrative of his views, from which he thought they would see intuitively what was intended. First of all, he repeated there must be a good subject. It was no use putting something before an Englishman and expecting him to embrace it eagerly if it was concerned with something which he did not thoroughly understand. The Englishman could not be expected, for instance, to be impressed by an artistic representation of an Eastern seraglio, with women smoking in cabarets hard by, as shown on one slide. To illustrate this point more clearly, one had only to recall the ludicrous attempts which the English potters made in the time of Queen Anne to supply the ladies of the day with a genuine Chinese porcelain set made in England. At this time nearly the whole of English ceramic design was dominated by the fascination of the aristocracy to have something essentially Chinese in which to partake of their tea, which cost a guinea a pound. One had only to go into a local museum to find a little square tea caddy, of Chinese inspiration, made about this time. But one would say immediately, "I know that was made by an Englishman." Why? Well, he made the caddy all right, but did not know then what to put on for its legs. So he put on four lions' heads. The joke of the incident was that the lions' heads were better than the Chinese. In short, it was an attempt to speak in Chinese to an English-speaking race.

Continuing, the speaker said he had not time to go stage by stage through the evolution of English pottery, but there was another period that was extremely amusing, and that was when South Kensington took up the question of seriously attempting to educate the nation in art. A professor from South Kensington—generally an art critic—was brought down to a place like Stoke to instruct the poor potters in the subject of art, and in order to do so resorted to a process of deductive reasoning in regard to colour combinations. But in their process of reasoning as to which particular colours were harmonical and which were not, they curiously enough overlooked that nature did all sorts of irregular things, such, for instance, as putting a gorgeous blue flower upon a green leaf. Fortunately all that was dead now, but one occasionally came across horrors quite as great in art criticisms. People often thought they were inveighing against the unreal in art by suggesting that a landscape painting should not be put upon a plate because by a process of logical reasoning a beefsteak could not be eaten from the top of a landscape. Well, could it be from the top of a rose, for the matter of that? Such a process of reasoning would probably confine the decoration of a plate to the representation of a certain daily newspaper, if that would be considered the embodiment of fact.

But what was the use of all these canting terms, this canting for cant's sake? The potter had practical issues to face. He must find out what his customers wanted, and then try to give it them in the best and most honest manner. If the subject were only good, why should it be out of place upon a dinner plate?

The Need for Composition in Art.

On the next count, that of composition, Sir Henry thought that considerable amendment might be made in much of the art of the Potteries. But the potters were not the greatest sinners in this respect. The academicians were, in some instances, very faulty. But what was this composition? He was afraid it would be difficult to explain it. It would be really difficult to make people understand what compostion in art amounted to, if they had not a natural feeling for it. To understand what composition really meant it was necessary to feel it. It was only by feeling it that a man could really understand the difference between "Pop goes the weasel" and "God save the King." Now everyone had an element of composition in their nature, small though it might be, and in the case of the artist it was imperative that he should cultivate it, whereas it was often repressed. If we could only analyse this feeling why certain things were beautiful and other things were not, we should find a sort of critic there to help us in our drawings and designs to reject the one and select the other.

To illustrate, the lecturer caused to be thrown upon the screen a number of slides showing the effect of exercising

composition in art, whether it were in the direction of mere design, scapes or representations of the human figure. By putting in amongst these certain Chinese examples he endeavoured to show how the Chinese, apparently untaught, excelled in the exercise of composition, and particularly in relation to pottery. "If you want to see what is meant by composition," said the speaker, "I invite you to examine what a Chinaman has found possible at 2d. a day, with a stick and a bit of colour on an ordinary Nankin plate." Why should this illiterate beggar have been able to do what some of our English academicians cannot? Partly by training and partly by hereditary feeling. What he (Sir Henry) wished to emphasise was the necessity for the artist to acquire a taste for composition, and, without being pedantic, to study the laws of composition in order that one's taste might be improved.

A large collection of lantern slides were demonstrated, and these included examples of the works of Blake, Turner, Corot, Raeburn, Wedgwood, Leighton and Reynolds, in all of which the lecturer sought to trace indications of a careful regard to the laws of composition. Whether it was that nature liked our eyes to swing in a sort of rhythmic way similar to the swinging of clubs he did not know, but the graceful way in which the lines seemed to flow, with here and there just a little break to relieve the monotony, as it were, was apparent in many of these works. It was no use asking him to define what he meant; it was impossible to do it. There was a sort of mystery about it which defied expression in language, but it was there all the same. One had only to take as an example a work of Blake and endeavour to effect improvement by changing the direction of certain apparently unimportant lines, and one would see what it all amounted to. To try to improve a detail was to court disaster for the whole. The beauty of composition was so complete that it was impossible to improve a single line. In using another picture as illustration, Sir Henry said: "Look at the direction of the trees. Give them any other angle and you spoil the composition. Take away the dome of Florence, and you ruin the picture." Describing a landscape by Corot, he said that while Corot was not quite so good an artist as Turner, his composition was fine. It was like the symphonies of Beethoven. In exercising composition every line would be seen to have its due relation. It did not follow that a man might not be a great artist even though he could not read or write.

Describing a slide illustrating some early Wedgwood vases the lecturer called the attention of his audience to the composition of the lines, how every single one of them created a feeling of beauty and pose. Much of this feeling for composition came to one largely through tradition. He would like to see this tradition encouraged in the town of Stoke-on-Trent, so that the children might grow up with a feeling for what was truly artistic, and evolve from within themselves a feeling for what was right in line and balance. A beautiful picture, true in its composition, hung permanently in a child's bedroom would have a wonderful effect in enabling the child to more and more acquire the feeling for what was beautiful. How clever the ragged old dragon pattern was in its representation of the God of Thunder rushing through the air and emitting the thunder from his mouth! It was full of composition. In many of the illustrations it was quite impossible to describe in language why they were beautiful any more than it would be possible to describe in so many words why a particular melody was sweet. One must feel it or could not expect to understand it at all.

Good Colour Arrangement Necessary.

The next thing—he need hardly say it to the potters of Stoke—was that they should arrange their colours well. What he would say in two or three words was this: If the English people like colour, give it them. Let them not be afraid of it a little bit. "But," some would say, "look how beautiful the Japanese work is with its pale greys!" Precisely, pale greys were beautiful to people who lived constantly in bright sunlight. Under heavy and grey skies the English people might be expected to like colour, and plenty of it. There was no need to be afraid of colour, then, so long as it was well harmonised.

Lastly, the artist must be poetical. There was always plenty of prose from which to choose, but it was extremely essential that art should have a dash of poetry in it. To illustrate what he meant he would now throw upon the screen a series of photographs and a series of art paintings by some of the great masters. Now the nature he had selected for the purpose was, in fact, good, but in the art pictures there was an indefinable something—perhaps it was the poetry and the art combined—which constituted the exact difference between art and nature. Art, in fact, was better than nature. Why? Because it contained the human element. It might not be better for the animal, and if oak trees could look at a picture they would probably prefer nature. But when man made a picture he was appealing to the subtle feelings of humanity all the time—his poetry, his sense of race, all that was within him.

He (the speaker) did not think an artist was worthy of his name if he was not prepared to admit that a work of art done by an artist must of necessity be better than a photograph. If this were not so, then let them banish all head work in the Potteries and turn to mechanically produced design, replacing the human faculty by the steam engine. Art was the very justification for the existence of the people of Stoke. Let them remember above all things that art really was above nature just as the soul of man was above inert matter. Turner could veritably twist nature to fit in with art. It was astonishing the alterations he could make, and always for the better. Contrasting a photograph with a painting by Rembrandt, the lecturer said, "Ah! Rembrandt surely is prettier than nature. Can you look at those two and still be a partisan to extreme realism?" Continuing, he said that photography could never tell its story sufficiently well. Art, all along the line, could give it points.

The Practical Side of Art.

Finally, it was no use coming down to Stoke to talk a lot of silly nonsense about art for art's sake. The potter had got to be practical in his art, and what was the issue? The object of the art of the potter was to produce the happy home. That being so, he had to see to it that he produced an art that would sell. He (the speaker) wished that more English ladies would copy the example of the Duchess of Sutherland, for instance, who said: "I am an indigenous woman, and must have the art of my own country." It was for the English people to encourage the crafts of their own countrymen. That was the best practical advice that he could give to the people outside Stoke.

In conclusion, Sir Henry paid an eloquent tribute to the new pottery and mining school now almost completed at Stoke-on-Trent. He had seen something of the schools of Germany, and had endeavoured to found them, but he could safely say that it was the best equipped school of any nation in the whole world, and without making a fulsome speech about Dr. Mellor, he would at least say that they had here a gentleman whom he (the speaker) at least regarded as one of the best chemists in Europe. The potters were on the right road to becoming good men of science. Some might say, "Oh, good rule of thumb is better than bad science." But good science would be better than any rule of thumb.

Finally, the speaker said he was looking forward to the time when the bottle-shaped smoke distributors of the Potteries would be regarded as being as obsolete as the hatchets of the ancient Britons. He was going to live to see potters consume their own smoke with ovens fired on a totally different principle, that would do the work twice as well—he meant ovens fired with producer gas—in which the heat progression would be mechanically registered during every hour of its firing.

If, in his science and his art, the English potter could only get in first, could only steal a march of ten years over the rest of the world—in real solid art, not that of the sham South Kensington type, there would be more of the happy homes. People were certainly becoming better educated, if gradually, in the direction of art, in spite of the detrimental effect of the very inartistic cinematograph film. The advance was noticeable not only in the periodicals and the illustrated papers, but also in the furnishings bought. The potter had got to live up to this movement, and if his present lecture did nothing more than convince his audience that in art there was something great, important, and learnable, which, if acquired, would play its part in improving art all over the world, it would not have been in vain.

THE ELECTRICAL TREATMENT OF LEAD POISONING.

(FROM OUR NEWCASTLE CORRESPONDENT.)

ON Saturday the Provincial Sessional meeting of the Royal Sanitary Institute was held in the Council Chamber, Town Hall, Newcastle, when Mr. T. Maltby Clague, Ph.C., of the well-known firm of Mawson & Proctor, Ltd., chemists, Newcastle, discoursed at length on the new electrolytic treatment of industrial lead poisoning. He thanked the City Council for having permitted him to fix up in the Chamber the actual working process that had been found to be most successful in the application of electrolysis in the prevention and treatment of metal poisoning. He explained the term to be a compound of two Greek words, electron and lusis, and signified a splitting up of chemical compounds by an electric current. Proceeding, he explained the incidents that had led him to the discovery of the process. He had been called into one of the largest factories in the district because the lead pipes had given out twice in nine months. He found that an electric current was finding its way to earth by their means of leaping over to the pipes where they were in contact with wet bricks. That current had set up decomposition in the pipes. After some demonstrations of the methods of detecting the presence of lead, Mr. Clague stated that a medical man had brought to him a young lady who had black spots upon her face as the result, apparently, of the use of arsenical ointments. It was not known what had been their cause, but under his process the applications of an aluminium rod with a piece of treated lint to the spots extracted sufficient indications of arsenic. He had been anxious to see whether so interesting a method could not be put to some practical use, and it was his very good fortune to reside in the same city as a distinguished authority on lead poisoning—Professor Sir Thomas Oliver—who was good enough to say at once that he realised very considerable possibilities in it. Sir Thomas and he had undertaken all the necessary investigations, and Sir Thomas had carried them through in a thoroughly characteristic manner, bringing to bear upon them that great knowledge of lead and other industrial poisoning which had made his name famous throughout civilisation. To Sir Thomas Oliver he (Mr. Clague) wished to express thanks for allowing a mere layman to make suggestions, and for taking those suggestions at their face value and putting them to a practical use. The speaker mentioned the case of a rabbit, which under the treatment had not only been cured of lead poisoning, but had secured such immunity that 1½ ozs. of metallic lead were put into it without poisoning it. The post-mortem test had shown that the rabbit had not only secured immunity, but had acquired the capacity for getting rid of lead. The matter had been put before a lead manufacturer, and the result had been that an installation had been put in. Any employee who showed any dangerous symptoms had been put under treatment and many good medical results had accrued. For the purposes of the treatment the human body was regarded as a bag of salt solution. It was demonstrable that in the human body there was a considerable quantity of common salt, some iron and in some cases some lead that was not wanted there. The amount of iron would be something like equal to the weight of a 3d. silver piece. No one seemed to know exactly how much lead there was in a lead poisoned person, but they might assume something like the tenth part of a 3d. silver piece. The quantity to be removed was not so very great, yet it was desirable that the amount of electric current sent through the man should be as great as safety and comfort warranted. Their problem had been to discover the method best suited. The old method of pads in a bath had the defect that they did not know how much of the current passed through the man, and how much was lost in the water. Their new method was two baths, one for the feet and another for the hands and arms or other parts of the body. By that method they secured a controllable current to pass through the body. They had succeeded in getting out considerable quantities of lead from all the men whom they had worked. The lead workers themselves were interested in the process, and went for treatment at their own expense, because being on piece work they were not paid for the time thus utilised. They liked the exhilarating effects the treatment produced. He was glad to say that every manufacturer with more than one works who had tried it at one place, had it at once installed at the other. That was a practical testimony to its utility. So much had been done by manufacturers under the guidance of medical men, and with perhaps a little stimulus from the Home Office, that he knew of a factory where 50,000 tons of lead were turned out, and yet they had never had a certified case of death from lead poisoning. But they thought that by putting into their hands the possibility of taking out lead from men who had absorbed a little bit too much of it they were giving the manufacturers an addition to the fighting forces they had at command. Sir Thomas Oliver, in the course of an address, stated the symptoms of the presence of lead in the system—the becoming pale and thin, and the appearance of a blue line along the gums close to the teeth. He also showed how lead might, as an albuminate of lead, be stored up in the system for years, until some effect, very likely that of a debauch, put it once more by re-solution throughout the system, and lead poisoning resulted. The weekly hot bath for lead workers was required by the Home Office, and he suggested—why not make it an electrical bath? Then they would at the same time not merely remove lead from the surface but from the system. The chairman, Dr. Philip Boobyer, remarked that the limits of the usefulness of that method of the application of electricity would be difficult to define, and he stated the possibility of relief for victims of the use of oleate of lead used as an abortifacient.

New Trade Marks

FOR WHICH APPLICATIONS HAVE BEEN MADE.

Objections to the registration of any of the following Trade Marks must be sent to the Comptroller-General, Patent Office, Southampton Buildings, London, W.C. A form for making such objection can be obtained at any money-order office at a cost of £1.



354,090. Lamp chimneys (glass). Class 15. John Davis & Son (Derby), Ltd., All Saints' Works, Amen-alley, Derby.

VALDA. 353,933. All goods included in Class 16. No claim is made to the word "Valdor." Johnson Fireclay Co., Ltd., Excelsior Works, Cliffe Vale, Stoke-on-Trent.



354,033. All goods included in Class 16 (made in England). Taylor, Tunnicliff & Co., Ltd., Eastwood Works, West-terrace, Hanley

Pottery and Glass Imports to Curacoa.—Earthenware and porcelain came during 1912 from :—Germany, £624 15s.; Netherlands, £202 8s. 4d.; United Kingdom, £108 16s. 8d.; United States, £95 3s. 4d.; all other countries, £24 15s. Glassware and glass were imported from the following countries :—Germany, £414 16s. 8d.; United States, £205 5s.; Netherlands, £140; United Kingdom, £23 8s. 4d.; all other countries, £13 1s. 8d.

THE GHENT EXHIBITION AWARDS.

BY the courtesy of the Exhibitions Branch of the Board of Trade we are in receipt of an advance list (marked "Under Revision") of the awards accorded to British Exhibitors at the Ghent Exhibition. The awards in Class 72, "Pottery and Porcelain," are as follows :—

GRAND PRIX.—Geo. L. Ashworth & Bros. ; Doulton & Co., Ltd., Burslem ; Doulton & Co., Ltd., London ; the Pilkington Tile and Pottery Co., Ltd. ; W. Howson Taylor.

DIPLOMA OF HONOUR.—William Adams & Co., Ashby Potters' Guild, Birks, Rawlins & Co., Bishop & Stonier, Ltd., the Crown Staffordshire Porcelain Co., Ltd., Gibson & Sons, Ltd., William Moorcroft, Ltd., Tooth & Co., Ltd., Wedgwood & Co., Ltd., A. J. Wilkinson, Ltd., Wood & Sons, Ltd.

GOLD MEDAL.—E. Brain & Co., William H. Goss, the New Chelsea Porcelain Co., R. H. & S. L. Plant, the Royal Aller Vale and Watcombe Pottery Co., Star China Co.

SILVER MEDAL.—William Bennett, A. G. Harley Jones, James Kent.

The non-competitive exhibits (Hors Concours) were those of CAULDON, Ltd., MINTONS, Ltd., and Mr. BERNARD MOORE.



PART OF POTTERY DEPARTMENT : NEWBURY'S, LTD., BIRMINGHAM.

A BIRMINGHAM POTTERY SHOWROOM.

SITUATE in the heart of the shopping centre of Birmingham is the extensive establishment of Newbury's, Ltd., drapers, furnishers, &c. With commendable enterprise the company have recently enlarged their china department, bringing it up to date in every respect. They now deal extensively in all kinds of china and glass, both ornamental and domestic. The department, from small beginnings, we understand, has developed in excess even of the expectations of the directors. The large output, especially of toilet, dinner and tea ware, has proved particularly encouraging. The illustration we reproduce of a corner of this department shows that it is well-lighted, admirably arranged, and fitted for all modern requirements. The large palms in pots are a distinctive feature of the display, and the small tables are employed with striking effect.

The Pottery and Glass Trade of Milan.—The British Consular Report for 1912 states that the ceramic industry suffered from the closing of the Levant markets and possibly from German competition. It appears that, notwithstanding the duties leviable and the cost of transport, German manufacturers can sell at better prices than Italian manufacturers. The glass industry is still struggling against adverse circumstances, and unsold stocks and foreign competition in many articles make the situation difficult.

Legal.

Obtaining Mugs by Fraud.—At Portsmouth on Oct. 18, John Walland was charged with obtaining by false pretences from Bailey Bros., glass and china merchants, Eldon-street, Portsmouth, two dozen glass mugs, value 11s. The evidence showed that the accused went to the firm's establishment and stated that the mugs were for the licensee of an inn at Southsea. This proved to be false, and on being arrested accused stated that he had given the mugs away. A sentence of 21 days' hard labour was passed upon the accused.

A Child Clay-Carrier.—On Oct 3, at Ormskirk Sessions, Miss F. I. Taylor, a factory inspector, prosecuted the Midland Pottery Co., of Melling, for a breach of the Factory Act. Miss Taylor, stated that on a visit to the defendants' pottery at Melling she found a girl carrying half-hundredweights of clay to the "moders," when the regulations distinctly stated that no girl under sixteen years of age should carry more than 30 lbs. of clay unless a medical certificate was granted. The girl was only fifteen years of age, and not strong. Defendants had been warned twice previously. Mr. J. S. Service, the manager of the pottery, pleaded guilty, and stated that of late his firm had been exceptionally busy. A fine of £5 and costs was imposed.

Glass Blowers Claim Damages for Wrongful Dismissal.—In the Lord Mayor's Court, on Oct. 21, before the Recorder, Sir Forrest Fulton, K.C., and a jury, a claim for damages for wrongful dismissal was made by Anton Stork, of Brent-road, Canning Town, E., against Moore, Nettlefold & Co., Ltd., glass workers, Charlton. The plaintiff said he was brought over from Bohemia in May of last year to work as a glass blower for the defendants. He remained in their employment until Jan. 28, and then, he alleged, was wrongfully dismissed. He denied that he had in any way interfered with the defendants' workpeople. On behalf of the defendants, evidence was given that they had come to an agreement with the Glass Blowers' Union on the question of wages to be paid to employees. There was, however, some dissatisfaction, and the defendants were informed that the plaintiff was interfering with workers who were coming from Bohemia. They therefore dismissed him. The defendants had advanced money to the plaintiff when he came to England, and there was a balance remaining unpaid of £4 19s. 8d., for which they counter-claimed. The jury found for the defendants on the claim and counterclaim. In the similar case of Benedikt v. Moore, Nettlefold & Co., Ltd., a verdict was returned for the defendants for £13 8s. 9d. on the claim and counter-claim.

Lead Poisoning or Consumption ?—(From our Potteries Correspondent.)—The question of whether a glost placer's death was due to consumption or lead poisoning was the point submitted to Judge Ruegg, K.C., and Dr. Otto Kauffman, medical referee, at the Stoke County Court on Oct. 15. The applicant was Maria Dearn, widow of John Dearn, formerly of 51, Wood-street, Longton, who claimed an arbitration under the Workmen's Compensation Act, the respondents being Bridgwood & Son, Anchor Pottery, Longton. The deceased, aged 47, had been engaged in lead processes all his working life, and for the last ten years had been in the employ of the respondents as a glost placer. There was a conflict of medical opinion. A post-mortem examination revealed that the heart was enlarged and slightly hypertrophied, but the kidneys were normal. The lungs, however, were tubercular throughout. Three doctors, called for the applicant, were of the opinion that death was due to phthisis, accelerated by lead poisoning. Two doctors, called by the respondents, however, expressed the view that the post-mortem examination revealed no evidences of lead poisoning, and one of them stated that the condition of the lungs was quite sufficient to account for the hypertrophy of the heart. His Honour reserved judgment.

Not Alcoholic Poisoning.—(From our Potteries Correspondent.)—A request for an arbitration under the Workmen's Compensation Act was made at the Stoke County Court on Oct. 15 by Eliza Newton, of 23, Goddard-street, Longton, in respect of the death of her husband. Samuel Newton, glost placer, aged 66, the respondents being Wm. Bailey & Sons, manufacturers, Forrester-street, Longton. Judge Ruegg had the assistance of Dr. Otto Kauffman as medical referee. The deceased man had been a glost placer since he was 18, and for the last eleven months of his working career was engaged at the respondents' works. The post-mortem examination showed that the lungs were affected, and that the heart was in a markedly hypertrophied condition. It weighed 20 ozs. The kidneys also were affected, and weighed 6 ozs. each. For the respondents it was submitted that the deceased was suffering, not from lead poisoning, but from alcoholic poisoning, the symptoms of which were similar. In awarding the applicant £150 compensation, his Honour said the evidence called by the defence to prove that the deceased was a heavy drinker was of the flimsiest description, for the employer said that the man had never lost work, while the contractor with whom the deceased worked said he had never seen him take more than was customary.

Alleged Breach of Agreement.—At Burton-on-Trent County Court on Oct. 8, Edith M. Coombes, aged 16, sued Mr. Wm. Ault, art potter, Swadlincote, for £50 damages for alleged breach of agreement. Mr. R. B. Hind, for the plaintiff, stated that in 1912 she worked for the defendant as an aerographer and lithographer, decorative processes in hand. An agreement for a number of years was entered into, and at first there were 12 girls engaged on the work. Owing to slackness of trade all left but the plaintiff, and in July last she received a week's notice to leave, although she had put in only 14 months under the contract, and she had found it impossible to get similar work near her home. The plaintiff stated that it was untrue that she had been released from the contract at her own request, or that complaint was ever made to her about her conduct or work. Under the agreement she was to receive first one-half and then two-thirds of the full wage of a journeyman decorator. Mr. Stuart Rowley, manager for Mr. Ault, said that if the plaintiff had remained with the firm for a full term of six years it would have been to her advantage. He asserted that plaintiff asked witness to give her work or to give her her liberty, and he agreed to do the latter. Eventually the judge and counsel consulted in private, and it was announced that Mr. Ault was quite prepared to show her real kindness of heart by agreeing to pay the plaintiff £15 and costs to be fixed on scale B. To this the Judge acquiesced, and entered judgment accordingly.

A "Dresden" Vase Transaction.—At Devizes County Court on Oct. 13, before Judge Gwynne James, Mr. Herbert F. B. Biggs, The Brittox, Devizes, was sued by Mrs. Geo. Simpson, wife of Mr. G. Simpson, J.P., Devizes, for £30, value of two Dresden china vases, entrusted to him to sell on commission, and £5 for the alleged unlawful detention of same. For the plaintiff it was stated that she possessed a pair of decorated Dresden vases, which bore on the bottom the crossed swords, indicating that they were manufactured at the Royal Factory at Dresden. She had them valued by an expert at Bath, Mr. Maynard, of Powell & Powell, who, at the time, made a note that

they were a very fine pair of decorated Dresden vases, bearing the mark of the crossed swords. Later the vases were sent to the defendant to sell on commission, but plaintiff was early informed that the vases were almost valueless, and on them being returned to her plaintiff declared that they were the wrong vases. For the defence it was stated that one of the vases was submitted to an expert at Bath by Mr. Biggs, and he was advised that it was common and modern, worth only a few shillings, and did not bear the crossed swords, but a crown and the word "Dresden." Mr. Biggs declared that the second vase never left his shop until it was returned to the plaintiff. The Judge said it was clear that there had been substitution for the vases at some time or other, but plaintiff had failed to satisfy him that the substitution had taken place whilst the vases were in defendant's possession. He therefore found for Mr. Biggs with costs.

Question of Notice.—(From our Potteries Correspondent.) The question of whether prolonged illness dispenses with notice to terminate employment came before the Stipendiary Magistrate (Mr. B. C. Brough) at Tunstall on Oct. 16. James Young, saucer-maker, of 23, Morley-street, Tunstall, claimed £6 wages, in lieu of a month's notice, from A. J. Wilkinson, Ltd., earthenware manufacturers, of Burslem. Plaintiff said he had been employed for a few months by the defendants, when, on Feb. 23, he was taken ill with a stroke, which prevented him following his employment until July 24. He then applied to the firm for work, and was told they had none to offer him. Again, on Oct. 1, he was told the same. Mr. W. Bloor, the defendants' managing director, stated that during Young's illness the firm made repeated inquiries as to his condition, and when, in June, they were told there was no likelihood of his recovering sufficiently to return to work, they engaged a man permanently to fill his place. Up to that time his job had been filled temporarily. The Stipendiary said the issue seemed to be whether illness operated as notice or dispensed with notice. Mr. W. H. Abberley, for the defendants, contended that an employer could dismiss a workman on the ground of incompetency without notice. Whether that in competency arose out of unskilfulness or physical inability, as in this case, was immaterial. Under the circumstances, he urged, it would have been brutal to have sent the man a month's notice while he was lying seriously ill. The Stipendiary found for the plaintiff and awarded him £3 6s. wages and 11s. costs. The amount of the man's earnings, as given by the plaintiff, was disputed by the defendants.

Compensation Act and Lead Poisoning—(From our Potteries Correspondent).—Judge Ruegg, K.C., gave judgment at the Longton County Court on Oct. 14 in the important arbitration under the Workmen's Compensation Act, reported in our last issue. The applicants were Ellen Dean, widow, and other dependents of Thomas Dean, deceased, and the respondents were the Rubian Art Pottery, Ltd., manufacturers, of Fenton, while Wileman & Co., manufacturers, of Fenton, were brought in as third parties to the arbitration. His Honour said he found the facts to be that the deceased man had, until towards the middle of 1911, been in the regular employment of the third parties for several years as a lead worker. During those years he contracted lead poisoning which assumed a chronic character. About May, 1911, he ceased to be regularly employed by the third parties, and became an odd man. Between this date and the time of his death, on May 15 of this year, he worked occasionally on odd jobs, for the third parties, but not in a lead process. In the months of March and April of this year he worked on several days (five or six in all) for the respondents in a lead process. On May 15 he died from pneumonia, his death being accelerated by lead poisoning. The respondents contended that the employment by them of the deceased for a few days could have made little or no difference to the disease of lead poisoning from which he was suffering. If the onus lay upon the applicants to prove that the temporary employment by the respondents accelerated death, he should feel obliged to hold they had not satisfied the onus ; if the onus lay upon the respondents to satisfy him that the employment by them did not accelerate death, he should be equally unable to say that they had satisfied the onus. It was enacted that "if the workman at or immediately before the date of the disablement" was employed in a lead process, the lead poisoning "shall be deemed to have been due to the nature of that employment, unless the employer proves the contrary." This man last worked in a lead process on April 19, and died on May 15. He could not hold that May 15 was "at or immediately after" April 19. The result was that this was not a case where the onus was shifted to the employers. The onus was on the applicants, and the latter had still to prove that the disease "was due to the nature of any employment in which the workman was employed at any time within the twelve months previous to the date of disablement (in this case death), whether under one or more employers." The question he had to answer was : Could the respondents, though the death of the workman was caused by the disease, be held liable where the facts showed, not only that there was no evidence that the disease was contracted or aggravated or the death hastened by employment in their works, but where it also appeared that there was no other employment during the previous twelve months that could have aggravated the disease or hastened the death ? With great hesitation he had come to the conclusion that under these circumstances the applicants had not brought themselves within the Act. They had, he thought, failed to show that the disease was "due to the nature of any employment in which the workman was employed at any time within the twelve months previous to the date of disablement, whether under one or more employers." Then the respondents said that apart from other defences they had shown that the disease was contracted in the service of another employer, the third parties, and that the third parties were liable, while they (the respondents) were relieved. He found that the disease was contracted by the deceased while in the employment of the third parties, but he also found that the disease was not contracted within the twelve months previous to the date of death. Further, he thought the last employer could only relieve himself of liability by showing that the disease was contracted in another employment when that other employer was liable to pay compensation. Concluding, his Honour said : "I am of opinion that if the respondents had been otherwise liable in this case, they have not succeeded in transferring liability to the third parties, and further, that under the circumstances of this case the applicants have no right to recover against the third parties. I confess to considerable dissatisfaction with my own judgment, as it results in deciding that there is no responsibility on any one, though the deceased man died from a disease within the schedule, and was engaged in the industry to the nature of which the disease was due within the previous twelve months. I hope there will be an appeal."

A Welsh China Dealer's Action.—(Special Report.)—A case which aroused much interest came before his Honour Judge J. Bryn Roberts at the Pontypridd County Court, on Oct. 9, in which Frederick Flook, china dealer, 54, Middle-st., Pontypridd, brought an action for damages against W. H. Angell & Co., chinaware importers, London, under circumstances detailed below. Mr. F. W. Beech, solicitor, Pontypridd, appeared for plaintiff, and Mr. D.

Rees, Pontypridd, for defendants. The particulars of claim lodged were to the effect that the plaintiff had suffered damages by reason of a breach of contract for the sale and delivery by defendants to the plaintiff of certain chinaware and other goods to the value of £37 5s. 8d., which defendants contracted to deliver and supply to plaintiff at Pontypridd. Plaintiff had paid £10 to defendants. Chinaware to the value (as alleged by defendants) of £6 5s. was tendered to Flook by the Taff Vale Railway Co., but, inasmuch as the same appeared to have been previously sent to a person at Bristol, and owing to the alleged dilapidated state of the case, it was not accepted. Plaintiff now claimed the return of the £10 deposit, and £25 damage for breach of contract in the non-delivery as ordered, and a consequential loss of profit. Mr. Beech opened at some length, stating that plaintiff saw an advertisement in a trade journal giving particulars of a firm in London—the present defendants—who advertised certain goods, and, particularly, Japanese goods—chinaware. On Aug. 19 the plaintiff wrote the firm seeking quotations for the supply of certain goods including mats and Japanese ware. A reply was received with quotations, and other stock lists. Plaintiff sent an order for the goods, which was acknowledged. The estimated value of the order forwarded was about £30, and plaintiff had sent two cheques for £10 each, one payable at once, and the other post-dated for a period of fourteen days. These were acknowledged, the defendants stating that one cheque had been entered to plaintiff's credit that day, and the other on Sept. 10. Defendants also wrote stating they were sending on some of the goods. The invoice varied from the order, and plaintiff wrote back inquiring why all the goods had not come to hand, the reply being that the other goods would be forwarded when the other cheque was paid. Plaintiff then consulted his solicitors, who sent a letter to defendants, who replied that they had already invoiced and despatched to plaintiff more than £10 worth of goods. Further correspondence took place between plaintiff's solicitor and the defendants, but no satisfaction being obtained the present proceedings were instituted. The goods which defendants had forwarded were estimated by them at the value of £6 5s. These were examined on the carrier's wagon at plaintiff's place of business, and he ascertained that they had previously been consigned to another person at Bristol. The case containing the goods was in a bad condition, and goods were loose inside, and plaintiff thereupon resolved to refuse same. Mr. Beech submitted correspondence to show that a contract had been set up, the Judge perusing it, together with the advertisement which had been referred to. Plaintiff was afterwards called and confirmed his advocate's submissions. He received the goods in a crate at Middle-street on Sept. 12. The crate appeared to be old and much used. He could partly see the interior through the side, and noticed some eggcups loose. He did not open the crate because there was another label on it. Eggcups were usually packed in dozens in card boxes, and should have been so packed on this occasion. Questioned by the Judge, plaintiff said the case was not half empty. The Judge: What do you mean by saying the goods were loose, then? Plaintiff said the covers were off the boxes. He only saw one eggcup. Replying to further queries by the Judge, plaintiff said the Taff Vale Railway people tendered the package to him, but it was not addressed to him, but to a man at Bristol. The Judge: How came it to you, then? Plaintiff could not say. He could not say how it came to Pontypridd at all. The Judge addressed Mr. Beech, and observed that there was no guarantee given that a new box, which had never been used before, should be used to consign goods to plaintiff. In submitting evidence of loss of profit, Mr. Beech inquired of plaintiff whether he had made arrangements for the sale to different people of the goods in question. The Judge: In the absence of a communication from the plaintiff to the defendants that he would sell these goods to A. B. and C. provided they were received by him on that date, the question of special damage could not be gone into. "Supposing," added the Judge, "you would say, I want the goods by a certain market day, and that they did not come, then there would be liability for special damage. In the absence of that there is only ordinary damage." Replying to the Judge, plaintiff said his turnover was between £30 and £40 weekly. The amount of the order was £37. The Judge: That's about one week's turnover. Plaintiff added that the profits he would make on the eggcups would be about 90 per cent. He would make a profit of about 1s. 9d. a dozen on the cups and saucers, and 33⅓ per cent. on the mats. Plaintiff under cross-examination by Mr. Rees, stated that he sent the post-dated cheque, together with the open cheque, on the same day. Mr. Rees: Why did you send a post-dated cheque? Plaintiff said it was a matter of convenience at the time. Mr. Rees: You had no money at that time, I take it, to meet it?—Not in the bank, no. Mr. Rees: I do not want to go into details, Mr. Flook, but you were pretty hard up at times?—Yes. Mr. Rees: There were judgment summonses out against you, for instance, in every court here?—Oh no, not every court. Mr. Rees: How often this year? Witness asked the Judge if he was bound to answer that question; the Judge stating he was. Mr. Rees: How many unsatisfied judgments are there in this court alone now against you?—I could not say. Mr. Rees: When did you appear on the last judgment summons?—About four months ago, I believe. Mr. Rees: Did you tell the court then you were making 80 per cent. profit?—No, because I had not started buying these goods. Plaintiff said he had started buying this class of goods locally some two or three years back. He had not bought them direct before four months ago. Mr. Rees: Look at that cheque; that cheque was dishonoured, was it not? Witness said it was. Mr. Rees: Where is the case of goods that was tendered to you?—At the goods station, I take it. The Judge said plaintiff had stated he had never opened it. Mr. Rees: Now I put it to you generally that you could not see any eggcups from outside, when the case was examined yesterday, that you can see nothing after it is properly packed, and it is still at the station properly packed. What do you say as to that?—What I say is that it is quite possible for any man to see the contents of that case. Re-examined by Mr. Beech as to the dishonoured cheque, plaintiff said he had given instructions to the bank that payment of the cheque was to be stopped. Mr. Beech: At the time you stopped the cheque, had you sufficient funds to meet it?—Not at the bank, but it was my intention to put it there. The stopping of the cheque had been the result of his (plaintiff's) verbal instructions. Mr. Beech stated he could call further evidence, the Judge remarking that with regard to delivery, plaintiff did not know what there was in the case. Mr. Beech said plaintiff was entitled to draw the inference that the package contained his goods when he saw the cardboard boxes in which they were usually packed. Each case was marked in a particular way, and accompanying the letter acknowledging the order was an invoice specifying marks on the case. From that plaintiff would know what the package was likely to contain. The Judge, however, said all plaintiff had done was to exercise guesswork, and assume things. He would non-suit plaintiff. During the hearing of the case, THE POTTERY GAZETTE was several times referred to.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR SEPTEMBER, 1913.

		Quantities.				Value.			
		Month ended September.		Nine Months ended September.		Month ended September.		Nine Months ended September	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	4,794	3,110	40,485	26,405	£5,325	£5,327	£49,677	£45,808
,, France	,,	9,268	10,562	60,614	68,515	11,783	11,292	70,039	86,529
,, United States of America	,,	20,872	16,562	195,718	193,675	35,400	30,761	290,669	309,000
,, Brazil	,,	34,817	25,900	282,624	301,427	19,831	20,212	159,967	224,106
,, Argentine Republic	,,	20,902	55,714	268,246	446,329	19,447	26,929	193,180	256,579
,, British South Africa	,,	13,801	9,064	87,725	113,939	14,047	8,814	90,428	102,813
,, British East Indies	,,	45,683	30,777	272,785	302,544	24,528	22,208	162,214	202,210
,, Australia	,,	21,078	15,738	187,679	203,931	29,433	22,231	229,093	242,103
,, New Zealand	,,	10,249	9,811	65,156	64,791	14,392	12,012	85,157	93,416
,, Canada	,,	64,948	34,878	426,188	444,675	41,465	33,185	329,175	378,916
,, Other Countries	,,	91,182	100,271	814,423	899,400	67,449	68,042	557,032	614,443
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	,,	1,642	1,661	11,768	14,867	19,163	19,315	112,716	149,396
Floor Tiles for Tesselated Pavement	,,	6,511	7,521	56,469	62,284	5,613	6,525	54,816	54,893
All other Tiles (except Roofing and Street Paving)	,,	16,999	12,583	110,599	130,883	18,438	13,467	107,620	136,732
Sanitary Ware	,,	36,895	27,428	265,978	286,240	48,362	42,697	370,792	426,401
Electrical Ware, Door Fittings, and Chemical Ware	,,	8,080	4,533	33,374	43,235	5,197	4,290	32,071	41,645
Other Earthenware (including Semi-Porcelain and Majolica)	,,	114,801	99,868	1,002,805	1,062,955	157,255	142,320	1,320,429	1,448,744
Jet, Rock'm, and Glazed Terra-cotta	,,	1,975	244	4,822	5,072	1,254	305	4,661	4,741
Red, Stone, Brown and Yellow Ware	,,	150,691	158,549	1,215,828	1,460,095	27,818	32,094	213,526	293,371
GLASS.									
To British South Africa	value £	—	—	—	—	11,108	11,729	75,917	84,375
,, Other Countries	,,	—	—	—	—	155,120	131,525	1,214,788	1,276,041
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	16,800	15,557	158,470	183,849	30,220	25,993	273,551	303,980
Flint Glass	,,	8,388	7,751	63,868	62,247	29,053	28,224	209,608	230,051
Glass Bottles	gross	101,783	84,100	742,329	714,857	63,598	53,819	457,584	445,684
Glass Manufactures, unenumerated	cwts.	56,494	44,196	476,352	475,291	43,357	35,218	349,962	380,701

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR SEPTEMBER, 1913.

Porcelain, Chinaware, and Parian	cwts.	3,142	3,454	33,313	32,294	£16,231	£18,479	£164,750	£163,301
Floor Tiles for Tesselated Pavement	,,	80	34	365	1,042	136	19	493	830
All other Tiles (except Roofing and Street Paving)	,,	1,593	3,358	21,996	27,534	1,391	2,511	13,802	18,703
Sanitary Ware	,,	—	44	287	233	—	181	595	600
Electrical Ware, Door Fittings and Chemical Ware	,,	2,402	2,799	20,419	22,747	3,643	5,034	32,065	38,135
Other Earthenware (including Semi-Porcelain and Majolica)	,,	26,667	30,269	236,345	250,090	53,336	58,970	474,134	505,894
Jet, Rock'm, and Glazed Terra-cotta	,,	29	—	202	806	97	—	706	1,651
Red, Stone, Brown and Yellow Ware	,,	5,846	39,972	168,545	263,889	1,539	7,302	39,060	55,900
Window and German Sheet Glass	,,	109,828	92,875	959,055	894,153	66,665	54,823	551,339	511,267
Plate Glass	,,	31,023	34,248	252,848	359,735	39,022	43,790	313,896	438,664
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	,,	73,265	86,008	636,223	712,586	107,625	121,313	950,832	988,797
Glass Bottles	gross	135,256	151,558	1,270,337	1,428,441	60,766	64,313	547,565	597,570
Glass Manufactures, unenumerated	cwts.	299	111	14,582	2,277	791	156	12,710	3,744

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR SEPTEMBER, 1913.

Porcelain, Chinaware, and Parian	cwts.	1,043	878	11,687	9,769	£5,771	£4,702	£61,361	£52,277
Of all Other Sorts	,,	929	647	6,566	9,360	1,322	1,744	9,383	18,986
Window and German Sheet Glass	,,	540	665	7,925	5,955	383	338	4,692	3,147
Plate Glass	,,	201	899	3,872	8,007	236	1,411	5,770	11,635
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	,,	1,285	879	9,613	10,482	3,115	4,109	25,275	34,088
Glass Bottles	gross	5,202	7,379	30,224	49,205	2,426	5,189	15,950	29,247
Glass Manufactures, unenumerated	cwts.	59	43	1,303	1,184	68	46	1,446	932

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Aug. 28, 1913, to Sept 27. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to Sept. 27. Packages.	Corresponding Period, 1912. Packages.
Boston	209	480	5,398	4,982
New York	618	983	6,665	6,991
Baltimore	142	547	4,375	5,833
Philadelphia	137	182	1,738	2,357
New Orleans	55	148	1,063	726
Newport News ...	—	—	41	54
San Francisco ...	31	157	878	1,138
Portland, Maine.	3	6	1,302	659
Galveston	43	86	254	460
Portland, Oregon	—	50	203	222
Inland Points ...	27	76	589	541
Total	1,265	2,715	22,506	23,963

CRATE AND BARREL PRICES.

(SPECIALLY CONTRIBUTED.)

JUST as we are on the eve of going to press one of our representatives has received certain information which leads him to strongly believe that before many weeks are over that old red rag, the package question, will be re-opened with all its irritating side issues. It may be that even the manufacturers are not yet aware of what lies before them, but we are able to say, with a degree of authority, that that movement which has been on foot for some little time, in the Staffordshire Potteries at any rate, amongst the coopers and cratemakers—we have subtly hinted at it from time to time in past issues—is now assuming definite proportions, and an alliance has been formed between not only the cratemakers and the coopers of the district but also the packers, which is apparently to be made the most of in the near future in order to strengthen their hands in demanding certain definite increases of pay.

For a long time past the men employed at the private cooperages and crate factories in the Potteries have been busy with propaganda work, and under the guidance and leadership of a Birmingham union official, important sections of every branch of workers employed in connection with pottery packages and packing have now joined hands, with the result that before many weeks have elapsed—December 4 is, in fact, likely to be a crucial date—notices will most probably be received not only by the master coopers from their own employees, but also by the pottery manufacturers from their packers, insisting upon augmented rates of remuneration.

The master coopers a few years ago themselves formed a ring to protect themselves against losses through severe competition and advancing prices for materials, and immediately proceeded to standardise their charges for casks throughout the Potteries area, and they, on their part, would appear to be somewhat sympathetic to the impending demands of their men, holding the view that 28s. a week, which is said to be an average wage for a journeyman cooper working full time on a nine-hour-day week, is not a commensurate return for his labour and skill, especially in view of the present high cost of living. At the same time the master coopers claim that imported timber such as they use has reached such prices—pounds per standard more than it normally should be—that any concessions made to their workmen will perforce have to be added to the selling price of their commodities.

What is to happen, therefore? The natural corollary would appear to be that immediately the master coopers are served with strike notices—and the men's demands are to be "more pay or strike"—the N. S. Master Coopers' Association, through their secretary, will in turn proceed to notify the manufacturers of higher standard prices for casks. Now practically every important master cooper of the district is said to be a member of the Association referred to, and seeing that the manufacturers' packers, whose union organisation is also assuming strength, have, so it is understood, made certain pledges to protect the coopers and cratemakers, it is likely that the situation will bristle with difficulties.

At first blush there seems to be little doubt that packages will soon cost more. In the absence of all the facts we reserve any comment as to the propriety of an alliance between the master coopers and a combination of their own workmen and those of the manufacturer, in order to make assurance doubly sure. But it seems to be pretty certain that packages are to cost more, and it is not quite feasible to assume that the additional charge will not be transferred by the operation of a very simple process to the shoulders of the dealer, and ultimately fall upon the consumer, in short, crocks are to cost still more.

We doubt whether either the manufacturers or the dealers are as yet aware of the trend of events in this connection, and we have, therefore, deemed it important that this somewhat lengthy and explanatory announcement should be made in the present issue of THE POTTERY GAZETTE. Forewarned is to be forearmed.

IS THE BRITISH COLOUR SENSE EXPANDING?

(BY A MEMBER OF OUR STAFF.)

A BRIEF reflection on recent events leads one to wonder whether a change is not imminent in relation to the British views on the functions of true colour. Certainly one cannot fail to recognise that of late a wonderful boldness and vivacity has been displayed in the matter of colouring, which has hitherto in our national life apparently not been accorded too much encouragement. An inspection of some of the windows of our leading millinery and mantle establishments at the present moment would almost seem to suggest that we are about to break away from a sombrous conventionality which has for a long time dogged our footsteps, and which has led to our being described as "quiet."

In illustration of our remarks, possibly as the basis thereof, we will quote what a Scotch paper has recently said, with some justification, in this connection:—

> "Britons have often been reproached with a positive fear of a display of colour, and this is said to have an injurious effect on our temperament, since our emotions are starved by a lack of colour sense, and we are consequently less hopeful and joyous. We are wedded to drabs, greys and browns, and should we by any chance break away from these, we are accused of plunging wildly into vulgar notoriety. Our colour sense is compared unfavourably with that instinctively possessed by the Japanese, the natives of India, the Spaniards and the Bulgarians. But surely, if slowly, Britons are realising the value of colour, and British pathologists are curing patients suffering from various forms of nervous diseases by placing them under glass, so that the concentrated rays of strong colour may fall upon them. Women have this summer shown their appreciation of colour, more especially in sports suits, and a golf course with women players has looked, when the sun shone upon it, like a huge lawn, lit up here and there with brilliant splashes of colour. The woollen and silk golf coats worn at the seaside have, on the dull days, lessened the depressing effect of grey and lowering skies, and have added much to the gay appearance of promenades and sea-fronts."

Now, if this transformation in wearing apparel had been limited to the seaside and the golf courses, probably little

more would have been heard of it—at least until next summer—but the casting off of the summer garment has, peculiarly, not brought the movement to an abrupt termination, and thereby hangs a tale. The public has apparently had a taste of something new, and for some reason or other—may the reason not be suggested by our title ?—is loth to relinquish its hold of it. Presumably there exists a lurking regard in our nature for these refulgent tints, and if any corroboration for this were needed would it not lie to our hands in the fact that the advent of the winter season has been marked by a display in certain quarters of bright, self-coloured dress materials such as has probably not been witnessed in our time, and upon which the only restraint likely to be exercised is a feeling of nervousness and self-consciousness ?

It may be that this vivid display of contrasting colour which is at the present time so much a feature of the window displays of our premier shopping centres is, as a matter of fact, more apparent than real : to put it more clearly, that it is simply a feeler rather than a reliable indication of the public taste. That will remain to be seen in the course of events, but it does appear to the writer as if the colourist were "hastening slowly"; he imagines he has tapped a new and bountiful spring in the public taste, and in this one hardly thinks he is wrong, although he, like the public whom he seeks to please, is somewhat timid as to the result.

But this change is apparent not only in regard to dress-wear. The house decorator, as is evidenced by what transpired at the Leamington Convention of Master House Painters and Decorators towards the close of September, is apparently tired of his present narrow confines, and blames the architect for narrowing down the scope of the painter's work until it has become so sombre and monotonous as to be described as drudgery. Not only so, but the very colours with which he is expected to work are, in the opinion of the painter himself, "frowsy." "Colour," said one of the speakers at the Convention, "like food and drink, is likely to suffer from over-mixing. The aim should be to get the pure colours, as far as possible." If that is to be regarded as an ideal we might well imagine that the colours offered for the selection of the gentler sex during the present season are approaching very near towards the idealistic. The same speaker recommended his colleagues to shun colours with "arty" names, for such were often mixtures which were not only affected, but bad. Chocolate, cinnamon, terra cotta, salmon pink, pea green and peacock blue—all might be described as various forms of colour-sickness, and consequently these should be set aside in favour of plain, definite, unadulterated colours which, though possibly oftentimes considered commonplace were, nevertheless, full of virtue. The alternation of simple, bright, unmixed colours was recommended as a fertile hunting ground in the matter of design, and the desire once expressed by Morris to paint a room with simple colours like a speckled hen, and Whistler's famous Peacock room, with its gold background and its blue feathers, were cited as examples of what might possibly lie before us in the future once our conventionality has been overcome.

Marbling and graining—we have it on the authority of the Convention already mentioned—may now be said to be relegated to the wood-cut pillars of the public-house door and the very second-rate houses. It is suggested, if not affirmed, that such uninteresting work as that which claims the present activities of the house painter is, for the most part, misdirected effort; that the true art of the decorator has, curiously enough, been banished to such prosaic things as canal barges, gipsy vans, ice cream carts and scene painting for the trumpery shilling show, and that, although turned out at lightning speed such work is yet full of knowledge and of power. The decorator has, it is said, been made timid by all the talk that has been heard about art and originality, and just frightened out of his wits. The only way to bring matters along to a rightful and normal condition is, so it is suggested, for the painter to firmly put down his foot and to say : "This is the way we paint." Energy, vitality and fearlessness are recommended as the criterions of the future.

It has often been said that there is nothing new under the sun. It may be so ; at the same time one cannot overlook the fact that in the past there have been certain distinguishing characteristics which have implanted their seal upon the art of periods and nationalities. The writer is not at all clear as to what is the outstanding, clearly-defining feature of our national decorative art to-day, or whether in matters of decoration our national ideas are not merely an agglomeration of a little of everything and enough of nothing. If that be so, it may be that there is clearly room just now for a distinct enlivenment in the matter of colouring. It would at least be one way in which to secure lasting popularity (or notoriety ?) for English early twentieth century decorative art. Most of us at least concede the general principle that colour is a very vital factor in human life. Is it not largely the colour of the stage which contributes towards its attractiveness ? Is it not the idea of colour at a social function which gives it a lasting impression ? And does not the descriptive writer invariably speak of something that happens as "lending colour" to the event ? Possibly were we to borrow a little more colour from those nations who are already famous for it, our national life would be imbued with a little more interest, and much of its monotony relieved.

In conclusion, the fact remains that a marked change is apparently knocking at our doors. Whether it will be embraced or not remains to be seen. But supposing it should be.. How is it likely to affect the pottery trade ? It may be that the Harlequin tea set will be reinstituted, in which a full palette of bright, single colours will be portrayed in striking contrast ; it may be that the dinner set will have a decoration rung on the counter-changes of certain pronounced hues ; self-coloured toilet ware and flower pots are already with us, and the variety is great, but these plain art colours are presumably only, as yet, the initial steps in a great movement. In what other directions is the potter now likely to look in order to meet what seems to be a changing condition in the colour sense of the British people ?

Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

OUR PRIZE COMPETITION.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I am interested in your announcement of a competition in this month's GAZETTE, but do not know quite whether I am eligible. I am buyer and manager of the china and glass department of a firm of drapers and furnishers, who, of course, subscribe to THE GAZETTE. Would this come within your expression of "Dealer" ? If so, I should be pleased to compete. Perhaps, also, you would let me know what number of words you limit the essay to ?—Yours, &c.,

Oct. 6. "SOMERSET."

[Our friend would certainly be eligible to compete as a "dealer." There is no stipulation as to the length of the descriptions.—EDS. P.G.]

THE CHINA CLAY STRIKE.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Now that there is every evidence that the clay workers of Mid-Cornwall are resuming their employment, may I ask your indulgence so as to make the following quite clear to your readers.

The impression has been abroad that all clay works in Cornwall have been put out of action. In fairness to my company and its loyal staff and employees, I should like that impression to be corrected. At no time during the troubles in Mid-Cornwall were our pits and kilns stopped in any way. We were working under extra pressure to keep consumers supplied over the difficult time, and we are still in full swing.—Yours, &c.,

WALTER SESSIONS (Managing Director).

The North Cornwall China Clay Co., Ltd., Oct. 7, 1913.

THE TREATMENT OF TRAVELLERS.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—We were interested in your article the other month re buyers giving a hearing to all travellers. We hope we are always courteous to travellers, but we also think, if you were situated, as we are, in a centre like Leeds, where practically every firm in the trade comes to, you would at times feel sorry for the buyer, as even travellers do pester one sometimes, and will not take No.

Have you come across the motto: "A soft answer may turn away wrath, but seldom a commercial traveller." We have this one in our office, but to be fair we have added another: "He who cannot smile should not keep shop."

We hope this meets the case, as if we must say No, we try to do it with a smile.—Yours, &c.,

Oct. 11. A. YOUNG & CO.

A CERAMIC "RENCONTRE."

TO THE EDITORS OF "THE POTTERY GAZETTE."

DEAR SIRS,—Possibly your august selves and also some of your readers will like to hear of a pleasing "rencontre" which I experienced recently when visiting a wayside inn in the course of a country ramble. In the rather stuffy parlour I found a group of some eight or ten sturdy Scots attired in full national costume, a chief of noble mien, his handsome spouse, their blooming offspring, and male and female attendants. They stood on a row on the mantelshelf, but as they were made of china I was unable to enter into conversation with them. Nevertheless, and though I am more closely concerned with crocks of more recent date, their dress and appearance told me something of their origin.

The remarkably fine Royal Blue of their upper garments and the very décolletée bodice of her ladyship strongly bespoke French influence, and made me hope that they might claim the historic purlieus of Chelsea as their birthplace, especially as a Duke of Argyll—Jeanie Deans' Duke, the hero of Sheriffmuir—was one of the patrons of the Chelsea works. Some defects of modelling however, led me rather to conjecture that they dated from the later Chelsea-Derby period, though perhaps based on earlier Chelsea models. In any case they were full of charm and vigour, and I fully enjoyed the short time I spent in their company.

I mention the incident as showing how often the itinerant ceramist may hit upon something of interest in the course of his travels.—Yours, &c.,

Oct. 21. VIATOR.

THE ANALYSIS OF CLAYS.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I think that the following will show you that your reviewer, in dealing with my book in your last issue, has been so eager to find fault that he has demonstrated that he has been quite out of his depth; that his knowledge of the subject is not sufficient to enable him to distinguish original matter from "scissors and paste"; and further, that he has made such astonishing blunders that his attempt to review a book so utterly beyond his capacity savours of presumption. These inferences are based on the following facts:—

(1) The references to Lunge—*re* p. 733. The reviewer thinks that the English translation is complete. I said "an English translation is in the course of publication." I presume that the publishers of Lunge know whether this is so or not; they say not. The reviewer either does not know or he has written what is false. As a matter of fact, I have had all the parts sent to me as they were published. Two of the four parts which have, up to the present, appeared were published after the work was in the press. But even now, as I write, the English translation is in course of publication.

(2) The reference to Mr. Green's work is quite correct in the book. The text describes the facts, and says exactly what was intended, and not what your reviewer thinks ought to have been said. As the book says the silicic acid was dried at 450 deg. and then dehydrated at 800 deg., are your remarks fair?

(3) My strictures—§ 102—on the guessing processes of analysis are quite correct, and also sound. The indirect process of separation is described—§ 105, § 106—in the same chapter. The reviewer hopelessly confuses what is very clearly expressed in the book. I have discussed the strong and weak points of the indirect processes of separation, and have condemned the guessing processes without reserve. The confusion in the reviewer's mind shows that he has not read the book, and that he has no idea of errors of experiment.

(4) I doubt if the reviewer can quote me any relevant original work by ceramic chemists which has been overlooked. His statement that "he notes with surprise some omissions" is a phrase which I beg to challenge. I believe the statement is false. I may be wrong, but it is up to the reviewer to give examples. I am not, of course, referring to the library, that was discussed on p. 732. I simply refer to relevant original work.

(5) The reviewer's remarks on analysed clay again show that he is blatantly ignorant of his ignorance. The analysed clays are concordant analyses by three or four independent experienced men. I do not receive a penny for the clays, nor do I sell them.

These notes embody facts which show that your reviewer has made blunders which any school-boy would scorn, and accordingly, opinions founded thereon must be worthless.—Yours, &c.,

Stoke-on-Trent, Oct. 1. J. W. MELLOR.

[We submitted this letter to our reviewer, whose reply, with Dr. Mellor's rejoinder, is appended.—EDS. P.G.]

T., THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—(1) That an English edition does exist of Lunge's work is quite clear from the statements in the review, and, indeed, the work can be seen in more than one public library. That a newer edition is in course of publication is not disputed, but does not alter the force of the remarks previously made.

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(2) If the reference to the dehydration in the book on p. 176 is, as Dr. Mellor now explains, it only shows some amount of ambiguity which may readily lead to confusion. This would have been avoided had the original volume contained the wording in Dr. Mellor's letter.

(3) The reviewer agrees with Dr. Mellor that "guessing processes of analysis" are deserving of stricture and exposure, but the fact still remains that Dr. Mellor has omitted the method of determining alkalies which is used by a number of reputable ceramic chemists. He mentions the weighing as chlorides and determination of the chlorine, but omits the weighing as sulphates and the deduction from this weight of the sulphur trioxide present. This is the crux of the difference, and enables the potash and soda to be taken together without guessing and without the errors involved by a determination of chlorine. That the direct determination by platinum chloride is preferable is not in dispute, though even this method depends on the absence of impurities in the mixed chlorides in order that the figure for soda may be correct, just as does the indirect method.

(4) It is not for a reviewer to state in detail the relevant original work he finds to have been omitted, nor even to give a list of names whose work might have been included. On re-reading the paragraph of which Dr. Mellor complains, the reviewer is still of the same opinion as when he wrote it. Of course, an author must decide what he considers is relevant, original, and generally suitable for inclusion in his book. Can it be that, in Dr. Mellor's opinion, the work of three well-known ceramic chemists is so devoid of originality and relevancy that it has all been anticipated by others?

(5) The explanation given by Dr Mellor with regard to analysed samples certainly removes the suggestion which may be read into the statement in the original volume. Here, again, it would have been better if the author had explained rather more fully what he meant by an analysed sample.

It is, perhaps, needless to add that if there is anything "unfair" in the review, no one would regret it more than the reviewer, who has a high personal regard for Dr. Mellor.—Yours, &c.,

Oct. 6. THE REVIEWER.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Please permit me to take your reviewer's replies to my charges one by one, starting with the last :—

(5) The reviewer reluctantly admits that he has "read into the statement" in my book what was not there.

(4) I am sure that no ceramic chemist of any standing would wish to be credited with work he has not done. I have acknowledged the work of all I knew up to the time of publication. I challenged your reviewer to give examples of what he claims to be omissions; he virtually replies that he can do so if he wishes. This is not evidence, and it is mere bathos in view of the reviewer's futile struggles with the other four charges I made. Consequently, until the reviewer does give examples, and until such examples have been verified as to their relevancy, the only possible inference is that the reviewer's innuendoes cannot be established.

(3) *a*. The reviewer makes certain charges against me *re* the determination of alkalies in clays. I answered that the reviewer had muddled what was clearly expressed in the book. He now writes a defence of the sulphate process. This has nothing at all to do with what the reviewer originally said, and which could not have been written if he had understood what he was talking about. It is very clear that the reviewer was engaged in introspection when he wrote that "his zeal for criticism outran his knowledge." Moreover, the process he says is not used is recommended in one of the best ceramic books on the market! The charge of muddling still stands.

b. I am, however, quite willing to take up the reviewer on his pct sulphate process; but I must ask him first to carefully read and study § 105 and § 106 in my book. He will there find stated that the errors with the sulphate process are slightly greater than with the chloride process, and yet the reviewer complains because I have omitted the worse of two faulty processes. This note *b* is quite a digression to show that the reviewer has not only signally failed to justify his statements, but that his amendation has demonstrated his incapacity even more clearly than before.

(2) As in (5) above, the reviewer admits, as candidly as his capacity will allow, that he has again read into the book what was not there.

(1) The reviewer still flounders about with Lunge in a surprising manner. There is no complete English edition; the reviewer has not seen the completed book (referred to on page 733 as being in course of publication) in any public library; he has not seen a "newer" edition; there is no older edition. The one and only English edition is in course of publication. (I am informed by the publishers that it is to be issued next spring.) The parts published while my book was in preparation are referred to on page 664. The reviewer has here no right to an opinion; he must accept the facts. I enclose the publisher's advertisement of Sept. 30, and this shows that the reviewer's knowledge of Lunge is not even superficial; he does not know the book at all.

The reviewer's reply has made his original review degenerate into a mere fiasco, and conclusively demonstrated the truth of my charges of ignorance, incompetence, and misrepresentation.—Yours, &c.,

Stoke-on-Trent, Oct. 10. J. W. MELLOR.

ANSWERS TO CORRESPONDENTS.

J. M.—We do not know of any case determining the law as to the liability of a customer to pay for goods which he may accidentally break. The custom is, we believe, fairly well established that "who breaks, pays," though it may be diplomatically waived when the damage is small and the customer is one who merits special consideration.

B. J.—We take the mark on the soap dish to be that of the shipping company

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and not the manufacturer's trade mark. We think the Ellerman Papayanni Line. This being so we have no means of ascertaining who is the manufacturer in the absence of further particulars, otherwise than by writing to the steamship company, which you can do just as well as ourselves.

Inquiries Answered through the Post.—Makers of toilet ware, Rd. No. 162993 (we had to refer back in our records 22 years to obtain this information).——Tall ale glasses, old English pattern.——Ware marked $\frac{\text{J.P}}{\text{L}}$ (J. Pouyat, Limoges).——Brown baking mugs.

S. J. asks for makers or names of firms handling Green Flemish Ware.

Reviews.

The A.B.C. of Collecting Old Continental Pottery. By J. F. Blacker. 315 pp., with over 250 illustrations in half-tone and line. London: Stanley Paul & Co. 5s. net.

We Britishers are so insular in our view, and have such an excellent conceit of our industrial achievements, that it is good for our right perception of things that we should look back upon the accomplishments of other nations. In this wider field of vision we shall then see our own work in truer perspective, and be able the better to apportion its true worth. Having done so we shall find our achievements are none the less important, but of this fact, in particular, we shall be reminded: that while we in this island were making pottery in a few isolated areas, and of the most primitive and rudest kind, the



Gubbio Dish.

Dated 1524. The sunk centre encloses a shield of arms in lustred dark blue, yellow, and ruby; the wide rim is painted with a bold design of arabesque foliage in lustred brown, green, and ruby, on a shaded blue ground. From the Taylor Collection. Sold for £2,835.
(Illustrated in "A.B.C. of Collecting Old Continental Pottery.")

raftsmen on the Continent were displaying high artistry nd producing wares which, within their limitations, ave not been equalled, and which in the sale room to-day ealise hundreds, and in some instances thousands, of ounds. At a time when our highest achievement was he production of the green glazed jugs of the crude Tudor nanufacture, that mæstro of Italian majolica, Giorgio, as enriching his pottery with finely conceived designs, gorgeously glowing lustre. And while our fabrications ere still in the stage of peasant productions, Germany nd Flanders were making their more substantial stone- ares, and France its ornately enriched faïence. Though ur ceramic development did not arrive till that wonderful ghteenth century, when it did come it came swiftly, volutionising the production of European pottery. was the English potter that first made white earthen- ware that was white throughout its body and not merely on the surface, for it must be remembered that the Continental earthenware—majolica and faïence—was, despite its refinement and beauty, something of a sham. Its coarse body had to be hidden by a white tin enamel. Therefore, the advance of the Staffordshire potters, when they achieved the production of cream, and then white, earthenware, was an unprecedentedly important step.

Mr. Blacker, who has contributed no fewer than five volumes to Stanley Paul's remarkable A.B.C. series, besides writing other books on ceramics, gives us a rapid excursion into the history, with all its romance and high attainment, of Continental pottery, and for placing such an opportunity within the popular reach we are indebted to him. Apart from the valuable South Kensington Museum handbooks, volumes on Continental pottery have hitherto been out of the reach of the ordinary reader or student by reason of their costliness or the obstacle of foreign languages. Here, however, is a volume which gives one an insight, by means of its text and its very numerous illustrations, into the principal productions and styles of Continental pottery. The book is not exhaustive by any means, for the subject, even though porcelain is not in any way included within the author's scope, is too immense a one to be dealt with comprehensively in one volume. It does, however, perform that very important office of exciting the desire to know more, and if it sets either students or collectors on the tracks of studying the subject more deeply, it will be the origin for them of a very pleasurable pursuit. The volume has its limitations and it has some failings. The description of the styles might have been arranged more in chronological, if not evolutionary, order; for instance, Italian majolica might have had preference to French faïence. Occasionally, too, the writer might have been more explicit or lucid in his statement of facts, and shown more clearly the relation of factory to factory and type to type. The illustrations, moreover, would have had added value if in every case the collection in which the piece is to be found had been stated, and if, in the description of styles or types, reference had been made more frequently to specific illustrations. Despite its minor defects the volume is a valuable one to the student and collector. For the latter it is specially designed, and for his benefit the numerous half-tone and line illustrations are supplemented by page after page of marks and various useful hints to aid in identification. The comprehensive list of sale prices will also give him a good idea of the recently prevailing figures for Continental wares, and incidentally it will inform him that he may have to pay as much as £2,835 for a particularly fine Gubbio dish, though he can still collect Continental wares with a more modest purse than the finest Italian majolica requires.

Dealing in the first place with French faience, the author devotes considerable attention to the skilful Henri Deux ware with its inlay of intricate interlacing ornaments. Technically, it is a great achievement; artistically, it is on a lower plane, for pottery that partakes more of the character of metal work than of the plasticity of clay is not really great in the scale of the potter's craft. The research of Palissy in the face of ever-present hardships and trials is touched upon, and the faïence of Rouen, Nevers, Moustiers, Marseilles and other centres is dealt with in successive chapters. Then the writer brings us to the stoneware of Germany and Flanders, and here we are on sure artistic ground, for none can dispute the real beauty

of the best products in this class of pottery. They may be heavy and solid in form and ornament, but that is due to the material in use, the purpose for which the articles were made, and, of course, the Teutonic temperament of the craftsman. It has been well said that we can read the history and the customs of a nation in its people's ceramic productions. The custom of beer drinking which first became so popular in Germany in the sixteenth century undoubtedly accounts for much of the stoneware produced and for the form the vessels assumed. In the same way the coming of the tea-drinking custom influenced much of the eighteenth century productions of England. Illustrations are included of fine examples of Raeren, Siegburg, Grenzhausen, Nuremburg and other stonewares—bold and restrained in their form and enrichment. The pottery of Delft, which had so much influence on the manufacture of tin-enamelled ware in England, receives a couple of chapters and many choice half-tone illustrations, and at length the author introduces us to the refinement and elegance of design and the technical excellence which the Renaissance gave to the pottery of Italy. The chief centres of production and the principal artists are dealt with interestingly; indeed, the best chapters of the volume are those sketching the rise and development of Italian majolica. In regard to the fabrique of Gubbio and its brilliant examples of lustred ceramics, the author quotes that eminent authority, the late Sir J. C. Robinson, who inter alia made the interesting statement that "the lustre colours were mainly confined to Gubbio, and that many of the leading majolica painters of Urbino and Castel Durante were in the habit of sending their wares to Gubbio (to M. Giorgio) to receive their lustre colours." This practice—it is worth observing—had an analogy a couple of centuries later in the custom of the Staffs. cream ware makers sending their products to Liverpool to be printed. The beautiful Rhodian faïence, together with the Persian, which almost entirely influenced its production, receives some attention, and the excellent illustrations enable one to appreciate the simple, quaint and altogether appropriate character of its decoration. The beauties of Hispano-Moresque are finally brought to the reader's notice. At a time when the reproduction of historic styles of pottery is so much in vogue, we would commend to designers a closer study of some of these Continental wares, particularly Italian, Rhodian and Hispano-Moresque, believing that they will find valuable inspiration in their high craftsmanship, soundness of design and true æsthetic qualities.

Transactions of the English Ceramic Society, Vol. XII., Part II., made its appearance early in October, and it is quite up to the standard of past numbers; indeed, the two parts of Vol. XII. when combined will constitute the bulkiest volume as yet produced by the Society, numbering close upon 400 pages of good, sound matter. Part I. we noticed on its appearance, and with regard to Part II. it is necessary for us to say but little, as with one exception, that of a paper taken "as read," and a communicated discussion thereupon, we have already reported fairly fully on the various papers and lectures as they have been presented from month to month. As regards the exception mentioned, which is in the shape of a paper by Mr. W. Thomason, of Lambeth, we hope to reprint this in an early issue. The concluding part of Vol. XII. now under review brings the work of the Society well up to date, and we congratulate them upon the promptitude with which the proceedings are now being recorded. The part contains an additional contribution towards a bibliography of the art of glass by the late Mr. M. L. Solon, and this has a melancholy interest, but we trust that in spite of the passing of Mr. Solon this work will be perpetuated. An obituary notice of Mr. Solon is a feature of the Part, this having been written by one who was brought frequently into touch with him in connection with the Society's work. We notice there are no "Abstracts from Foreign Journals" in this particular number, but it is to be hoped that this work, which has been a very useful feature of the "Transactions" for some time, will not be allowed to lapse. On the whole the present Part has been very well produced, and the illustrations and diagrams are specially well executed. The copious illustrations accompanying the paper of H.M. Factory Inspector, Mr. C. R. Pendock, on the subject of "Dust Removal in Pottery Workshops," should be exceedingly useful to manufacturers. We do not quite understand the significance of the letters "h.c." appearing twice on page 259 in the formulæ included in the "Study of the Chromium Red Glaze," by Mr. C. E. Ramsden, but possibly this is to be attributed to the proof reader, and should have been interpreted by the printer as an instruction to employ the "higher case." On the whole, however, the work is comparatively immune from printers' vagaries, and the Society is to be congratulated on the extension and improvement of its half-yearly publication. We should not be at all surprised to see the Society's official organ appearing even more frequently in the near future.

Chinese Porcelain in Whitechapel.—On Oct. 17 there was opened at the Whitechapel Art Gallery an Exhibition of Chinese Art objects which is to remain on view until Nov. 30. It includes a choice selection of porcelain lent by His Excellency V. L. Lew, Chinese Minister, Mr. R. H. Benson, Mr. G. Eumorfopoulos, Mr. W. C. Alexander, and other gentlemen, as well as one case sent from South Kensington Museum. Many of the exhibits are identical with those shown earlier at Manchester, and described on p. 773 of our issue of July, 1913. The selection is admirably adapted to supply a complete range of Chinese ceramics from the earliest to the latest styles. Though the typical figures of truculent warriors, benignant deities, and mythical animals are well represented, the majority of the pieces consist of vases, bowls and other vessels with characteristic coloured decorations. Among these are some splendid flambé and transmutation glazes of the K'ang Hsi period, and a few charming blue and white prunus jars. The quaint Han figures include one representing a pig in a sty, and another of a mastiff, both remarkable for their vigorous execution. A white horse and a camel of the T'ang dynasty are also full of life. A number of tiny vases lent by the Chinese Minister are exquisitely finished and many of Mr. C. S. Holberton's 250 snuff bottles are also delightful specimens of ceramic art. The general excellence and comparatively large numbers of the porcelain exhibits, as well as the highly illuminating descriptive notes in the penny catalogue, are to a great extent accounted for when we mention that the name of Mr. Wm. Burton, F.C.S., appears among the list of members of the committee. We viewed the exhibition during a wet lunch interval, and found it was being appreciatively studied by a goodly number of visitors, mostly of the artisan class. The fine fancy and beautiful finish of the Chinese articles could hardly fail to exercise a beneficial influence on the manufactures that some of them were engaged in, though there were probably no potters among them.



Obituary.

MR. ALFRED SPENCER GREEN, Aged 41.

THE works flag of the Crown Staffordshire Porcelain Co., Ltd., Fenton, floated at half-mast to signalise the passing on Sept. 27, at the Longton Cottage Hospital, in the prime of life, of Mr. Alfred Spencer Green, one of the firm's esteemed managing directors. The deceased had not been enjoying really good health for some time past, but the beginning of the end was marked when he was recently seized with an attack of pleurisy, followed, before he could quite overcome it, by complications calling for his admission to the Longton Cottage Hospital. An operation was considered necessary and was successfully performed, after which, however, his strength was not sufficient to sustain him, and the end came.



MR. ALFRED S. GREEN.

Mr. Alfred Spencer Green was the eldest son of the late Mr. Spencer Green, who was himself a manufacturer and a former chairman of the old Urban District Council. The whole of the deceased's business career, extending in all over some 28 years, was devoted to the Minerva Works, many years of his service being spent in the capacity of works manager, and more recently (since 1903) he occupied the important position of managing director. He was a gentleman who was not satisfied with mere rule of thumb in his direction of the pottery, but always endeavoured to solve his difficulties and press forward from a scientific point of view, recognising that principles would remain when recipes were lost and forgotten. With this end in view he was for many years an ardent student of the Pottery Classes held under the auspices of the Staffordshire County Council, and since 1905 enjoyed membership in the English Ceramic Society, in whose proceedings he was always enthusiastically interested.

Next to the relatives of the deceased who are left to sorrow his loss, perhaps none will lament him more than the workpeople whom he so considerately directed, for he was ever reasonable and patient in his bearing, and worked with the whole of his staff as a colleague, although he was in reality their director. The pensive memories occasioned amongst the workpeople by his sad demise may perhaps best be gathered by the course of events. Over eighty of the male employees were present at the interment to witness the last sad rites, and the workpeople as a body contributed liberally towards the floral tributes. Not satisfied with this, we learn that a deputation waited upon the deceased's brother directors and craved permission to contribute to a more lasting testimonial of their sympathy.

The deceased will not only be revered in the Potteries which he made his home, he will be sympathetically recalled by many of the London buyers, and more especially by dealers in the provinces, with whom at one time he came directly into touch, although he never preferred sustained travelling.

We extend our condolences to his relatives, and in a special degree to his younger brothers, Mr. Samuel A. Green, who acted with him as managing director, and Mr. George Douglas Green, upon whose shoulders his mantle will fall in carrying on uninterruptedly the business of the Crown Staffordshire Porcelain Co., Ltd.

MR. TOM HALL, Aged 49.

WITH tragic suddenness, and causing quite a shock to a wide circle of friends, amongst whom he moved, Mr. Tom Hall, of Penrhyn House, Waterloo-road, Burslem, and a partner in the firm of Gater, Hall & Co., Royal Overhouse Works, Burslem, passed away on Sept. 27 from heart seizure. Only a few hours before, apparently in the best of health, he had attended the funeral of a fellow-member of the Burslem Conservative Club. After returning home in the evening, he conversed jovially with his two boys as to their afternoon's sport, and afterwards retired to rest without anything unusual having occurred. Only a little time elapsed, however, before he experienced a heart seizure, necessitating the calling in of Drs. S. King Alcock and A. Gilchrist, who resorted to artificial respiration. This, unfortunately, as well as every medical assistance, was without avail, and he passed away, leaving a widow and two sons to mourn him.



[*Photo. by P. Swift, Burslem.*
MR. TOM HALL.

The deceased was an active figure in the potting trade, and was extensively known and respected. All his life he had been identified with the trade, his career being commenced at an early age with the firm of Wood & Bagguley, Burslem. After ten years in their service, at the end of which period he had found for himself a responsible position, he decided to start out in business on his own account, which he did in Hanley, but he subsequently elected to throw in his lot with his brother, Mr. John Hall, the partners buying over the business of Thos. Gater & Co.,

earthenware manufacturers, Furlong-lane, Burslem. The business growing apace, more extensive premises were afterwards taken in the Gordon Pottery, Pinnox-street, Tunstall, and twelve years later, still further extension being acutely necessary, the Overhouse Pottery, which had been vacated by Ralph Hammersley & Son, was taken, and here the business has been carried on ever since.

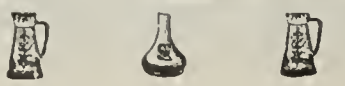
Energetic to a degree, and tactful withal, the late Mr. Tom Hall contributed very largely to the remarkable development which the firm enjoyed. Undertaking most of the travelling he succeeded in widening, largely by his personality, the boundaries of the firm's markets, and in London he was always at home in the knowledge that his friends in the trade were many and real. He was a Past President of the United Kingdom Commercial Travellers' Association, and a member of the Eccentrics Club. As a Freemason he had been a member of the Sutherland Lodge (451) for many years, and his rank at the time of his death was that of Senior Warden. He was also on the roll of the Royal Arch Lodge. In politics he was a Conservative to the backbone, being regularly seen at the Burslem Unionist Club, and often found supporting his party speakers on their platforms. As a member of the Burslem Felons' Association, he fulfilled the duties of president some four years ago.

The deceased was a keen lover of outdoor sports, and was formerly a president of the Burslem Cricket Club. Amateur theatricals also interested him, and years back he was personally identified with the Stoke-on-Trent Amateur Operatic Society. One might chronicle many good works with which he was associated. One of these was the annual Christmas dinner given to the poor children at Cobridge. In this he was always an enthusiastic worker, and himself contributed generously towards it, catching the spirit of the adage that it is always more blessed to give than to receive.

The funeral took place at the Burslem Cemetery on Wednesday, Oct. 1, amid such manifestations of sympathy and regret as can only be described as phenomenally proving the high esteem in which he was everywhere held. The following to the cemetery was unique in its wide representation.

Our sympathy goes out specially at this time to the deceased's widow and to his two sons, who are thus so untimely robbed of husband and father, and also to Mr. John Hall, who has lost so ardent and helpful a co-worker and brother.

The New United States Tariff.—A correspondent of "The Times" cabled from Washington, on Oct. 6, saying :—"Surprise is beginning to be felt here and in commercial circles in New York at the slowness of British manufacturers in recognising that, except in regard to wool and the woollen schedule, the sugar schedule, and a few other minor details, the lower duties imposed by the Underwood Bill are now in force. As yet very few representatives of the English industries that might benefit seem to have arrived here, although commercial travellers from Germany, France, and some other countries have been on the scene for some time opening offices, studying the new situation, and even collecting orders. It need hardly be said that this is a state of affairs calculated to hurt British prestige. It cannot fail to accentuate the belief that the British manufacturer is no longer as capable as he was, and that he is being outgeneralled, especially by the Germans. It cannot be too strongly emphasised that the Americans above all people appreciate promptness."



EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars for September are given in the "Board of Trade Labour Gazette" :—

POTTERY TRADES.—Employment continued fairly good, and showed an improvement on both a month ago and a year ago. Returns from firms employing 17,740 workpeople in the week ended Sept. 27 showed an increase of 0·4 per cent. in the number employed and of 2·9 per cent. in the amount of wages paid compared with a month ago. Compared with a year ago there was an increase of 2·9 per cent. in the number employed and of 1·9 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture ...	3,417	£4,117
Earthenware manufacture ...	11,914	11,353
Other branches (including unspecified)	2,409	2,278
Total	17,740	£17,748

Districts.	Number employed.	Wages paid
Potteries	13,214	£12,615
Other districts... ...	4,526	5,133
Total	17,740	£17,748

Employment in both the china and the earthenware sections showed an improvement on the previous month both in the Potteries and in other districts, with the exception of Bristol.

GLASS TRADES.—Employment in the glass bottle trade was reported as moderate, and worse than a month ago and a year ago. In other glass trades employment continued fairly good. Returns from firms employing 7,781 workpeople in the week ended Sept. 27 showed a decrease of 1·7 per cent. in the number employed and of 3·6 per cent. in the amount of wages paid as compared with a month ago. Compared with a year ago, there was a decrease of 2·7 per cent. in the number employed and of 6·9 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,665	£7,192
Flint glassware (not bottles) ...	1,808	2,178
Other branches... ...	308	345
Total	7,781	£9,715

Districts.	Number employed.	Wages paid.
North of England ...	808	£1,025
Yorkshire	4,498	5,725
Lancashire	910	1,064
Worcestershire & Warwickshire	686	888
Scotland	573	705
Other parts of United Kingdom	306	308
Total	7,781	£9,715

Employment in the glass bottle trade was moderate in Yorkshire, and not so good as a month ago and a year ago. It continued moderate at St. Helens and on the Wear, some short time still being reported. At Glasgow and at Portobello employment remained good. Employment was fair with sheet glass flatteners and good with sheet and plate glass workers at St. Helens. It continued good with flint glass makers and cutters at Birmingham and in the Wordsley and Stourbridge district. Plate glass bevellers and silverers at Birmingham were still well employed. With pressed glass makers on the Tyne and Wear employment continued fair. With glass blowers in London it was bad, and worse than a month ago and a year ago.

THE PLASTICITY OF CLAY.*

DEFINITION OF PLASTICITY.—Plasticity, as here spoken of, is a property developed in a clay by water, by virtue of which the clay can be moulded, without crumbling, into shapes which remain stiff and unchanged after the removal of the moulding force. It increases with increasing strength and with increasing capability of flowage (where flowage implies continuity of form).

EARLIER RESULTS.—The measurement and cause of plasticity were the object of a former study. Some experiments and calculations are given here in continuation of that study of the causes of plasticity. In summary, our first conclusions were: (1) That plasticity varied without definite relation to any other determinable physical property of clay. (2) That some clays are more plastic than any other mineral powder, even when in nearly the same physical condition, probably because of an attraction between clay and water, due to chemical constitution.† This idea will be re-stated, eliminating some inaccuracies. (3) Colloids were shown to affect plasticity. This paper reviews that work and adds new data. (4) The effects of fineness, shape of grain, and other factors were measured with care, and found quantitatively insufficient to account for the plasticity, though each had some effect.† Little discussion has been given them recently.

THE PROBLEM.—Consider the gradual addition of water to a dry clay. The hygroscopic moisture and possibly double that amount seem to produce little change in the behaviour of the clay powder. With 10 or 12 per cent. water, some clays will form a very stiff mud, requiring high pressure for moulding and allowing only slight flowage without fracture. If more and more water is added, the clay becomes gradually softer, until it flows as a thin liquid and has no measurable strength. Between these two points, both strength and flowage are measurable, and plasticity possesses a maximum. The addition of water, or a similar liquid, is essential, and must be considered as of prime importance as a cause of plasticity; but since water does not make other mineral powder equally plastic, we must seek farther.

Plasticity being a double property, involving both capability of flowage and strength, must have a cause that will explain both factors. In a wet clay, the flowage is commonly and correctly considered as explained by the lubricating action of the water between the grains. Water is so clearly fluid that we all expect and know that the addition of a considerable quantity to any fine powder makes that powder somewhat more fluid. This factor being clear, there remains to be explained the cause of the strength of the wet mass. Something must render the water viscous, so that the clay resists flowage, except under rather great pressure, when wet enough to be well lubricated. Common dilute solutions and suspensions are not viscous enough. Only two explanations are well supported: that of molecular attraction, and that of colloidal solutions.

THE MOLECULAR ATTRACTION THEORY OF PLASTICITY.‡—Every solid particle wet by water has over its surface a thin film of water bound to it by such strong attraction that it becomes viscous. The friction of moving water at the contact is said to be infinite as compared to that in water outside the film. The strong attraction, however, has not been detected at a distance of more than about 0·00005 mm. from the contact surface and would seem to involve a very inconsiderable amount of water until one recalls the minute size of clay grains. Calculation will be given to illustrate this. The essential fact in the theory is that the attraction varies with the nature of the substances. If attraction is stronger in clay than in other powders, a thicker film will be bound and rendered more viscous than by other powders; and so the wet clay will be more plastic. The range of attraction is so small that no method has been devised for showing variations for the different substances, but such variations are constantly assumed by the physicists.

The adequacy of the idea is questioned by Purdy,* who presents a calculation to show that in most clays much water is used besides what is needed for films. It is well to think out carefully the relations of grains, films and pore spaces. Pore space in clay varies widely, records showing 18 to 31 per cent. Theoretically, uniform spherical grains always have over 25 per cent. pore space. In an actual clay, King found a pore space as high as 48 per cent.† In state survey reports, we find Illinois clays range from 23 to 28 per cent., Iowa clays from 18 to 31 per cent., West Virginia clays from 23 to 30 per cent. Evidently the lack of uniformity in size of grain is balanced by the angularity and lack of a compact arrangement of grains, so that a pore space of 25 per cent. is a good conservative average.

Next, consider the effect of adding a film of water around each grain, just thick enough to be rendered viscous. It is not suggested that water added to clay usually forms such films before filling the pore space; just the reverse. But for clarity of ideas consider, now, each grain as enlarged by the addition of this film 0·00005 mm. thick on all sides. The grains would tend to be more uniform rather than less uniform in size. There is no reason to think that these enlarged grains would be arranged in such a way as to cause any reduction in per cent. of pore space. The enlarged grains, packed so as to touch their neighbours on several sides, would still have 25 per cent. pore space. This could be filled with water without separating the grains any farther; that is, even with the addition of 25 per cent. by volume of water, the grains would still be so close together that viscous films would be in contact between each grain and its neighbour. There would be resistance to flowage, after addition of water enough to fill both pores and films.

Now a calculation of water needed for films and pores must be based on some assumptions. For the size of grains I use the mechanical analyses. (First assumption.) One might assume numerous observations that clay grains are plate-like in form, but as this gives a large proportion of film and pore space it might be more conservative to assume half spherical and half plate-like, with breadth five times as great as thickness. (Second assumption.) The pore space is 25 per cent. (Third assumption.) The specific gravity of clay is 2·7.

CALCULATION OF THEORETICAL "WATER OF PLASTICITY."—Stated in terms of per cents. of dry clay, and calculated for several sizes of grains.

I.—FOR SPHERICAL GRAINS LESS THAN 0.0001 MM. IN DIAMETER.

The average diameter of dry grains is 0·0005 mm.

The average diameter of grains enlarged by water films is 0·0006 mm.

The volume of a dry grain is $\frac{\pi D^3}{6} = \frac{\pi(0{\cdot}0005)^3}{6}$ cubic mm.

The volume of the enlarged grain is $\frac{\pi(0{\cdot}0006)^3}{6}$ = cubic mm.

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* By F. F. Grout and Frederick Poppe, Minneapolis, Minn. Reprinted from Vol. XIV. of the Transactions of the American Ceramic Society.

† F. F. Grout, Jour. Amer. Chem. Soc. XXVII.

‡ The original statement of this idea has been criticised and the present statement improved by Ross C. Purdy, Ill. Geol. Survey, Bull. 9; H. Ries, "Clays, Properties, Occurrence and Uses," Wiley & Sons; and H. E. Ashley, U.S. Geol. Survey, Bull. 388.

* Ill. Geol. Survey, Bull. 9, p. 176.

† U.S. Geol. Survey, 19th Annual Report, Part 2, p. 208.

Ratio of original volume to enlarged volume is $\frac{(0{\cdot}0005)^3}{(0{\cdot}0006)^3}=\frac{125}{216}$.

That is, 125 volumes of clay bind 91 columns of water in viscous films.

Now if the grains, enlarged by films to a volume of 216 units, were packed as closely as possible without thinning the films, there would still be a large pore space which we may assume to be 25 per cent. of the whole, the enlarged clay grains occupying 75 per cent. of the whole.

If 216 units of volume are 75 per cent., 100 per cent., or the whole volume of clay, films, and pore space, is $\frac{100}{75}$ of 216=288 units volume.

The volume ratio of clay to (clay+film+pore) is $\frac{125}{288}$.

The ratio of clay to (film+pore) is $\frac{125}{163}$.

This means that in the case suggested more volume is occupied by water than clay; but if we assume that clay has a specific gravity of 2·7, the 125 units of clay by volume represent 337·5 units by weight and 163 units of water by volume represent 163 units by weight.

The addition of 163 parts by weight of water to 337·5 parts by weight of clay is an addition of 48·3 per cent. of the weight of the dry clay. This is the requirement for films and pores in spherical grains below 0·001 mm. in diameter.

II.—Small Plate-like Grains.

Abbreviating the calculation for plate-like grains, we may assume the original grain to be 0·0005 × 0·0005 × 0·0001.

The enlarged clay grain would be 0·0006 × 0·0006 × 0·0002 mm.

The volume ratio would be $\frac{25}{72}$. The ratio $\frac{\text{Clay}}{\text{Water}}$ $\frac{25}{47}$.

Similarly, considering a pore space of 25 per cent. still to be filled, we find the ratio of clay volume to (film+pore) volume to be $\frac{25}{71}$.

Again, assuming that the specific gravity of clay is 2·7, we can calculate per cents.

The per cent. of water for films and pores is 104 per cent.

III.—Large Spherical Grains.

With larger grains the standard size is 0·001—0·005 mm., but Mr. Purdy, in Illinois University, selected a size 0·001—0·01 mm., and the calculation may be made for grains as he wants them.

The original diameter may be assumed 0·005 mm.

The enlarged diameter is then 0·0051 mm.

For spherical grains the volume ratio is $\frac{125}{132.65}$.

The ratio $\frac{\text{Clay}}{\text{Water}}$ by volume is $\frac{125}{7{\cdot}65}$.

With water added to fill the pores 15·3 per cent. water is required.

IV.—Large Plate-like Grains.

For plate-like grains the following serves:

Original dimensions 0·005 ×0·005 ×0·001.

Enlarged by films 0·0051 ×0·0051 ×0·0011.

The volume ratio $\frac{\text{Clay}}{\text{Water}}=\frac{25}{3{\cdot}6}$.

With water added to fill pores 19·7 per cent. water is required.

Some allowance may be made especially for pore spaces in still arger grains, if they constitute a high per cent. of the whole.

From this it is seen that for grains less than 0·001 mm. in diameter, an average of about 75 per cent. water is required. For grains below 0·01 mm., an average of about 18 per cent. water is required. In twenty Illinois clays reported by the State survey, the average water used was 15·8 per cent.; that calculated for films and pores was 16·3 per cent. Similar results are obtained from Iowa and West Virginia clays where analyses were available. Now while these averages are very close, the variation in particular cases needs explanation. Two points may be mentioned. First, clays vary in the shape of grain, and our assumption may be wrong in particular cases. Second, the per cent. of water needed, as reported in these bulletins, is determined by a man's opinion, and not by a mechanical test of the plasticity.

However, the space here devoted to the calculation may give the matter undue prominence. There is no doubt that viscosity in these films is very great at the contact. Also, it is clear that the viscosity decreases very rapidly with distance, as it is inappreciable at a distance much over 0·00005 mm. The point to emphasise is that for some distance, no matter what, the film is viscous, and the thickness and the viscosity vary with the substances used.

There may be some question as to the justice of assuming that the films spread to all sides of the grain. Consider the water between the solid particles as having a greater attraction for clay than the clay has for clay. More water particles will be drawn in between the clay grains (as long as there is a supply) until the water covers all sides of the clay to a thickness equal to the range of molecular attraction. There is a tendency for grains to separate—deflocculation. On the other hand, if the clay grain attracts its neighbour more strongly than it does water, the clay grains will crowd out the water and draw together—flocculation. Salts present in the water affect the attraction, as can be easily shown in dilute suspensions. Some salts and concentrations cause flocculation, some deflocculation. In the Illinois Geological Survey, Bulletin 9 (page 189), Purdy discusses this matter (speaking of "potential" which he does not define or use clearly). He implies that potential, surface tension, and surface pressure have a greater range of activity than molecular attraction, but they are really manifestations of the same force.

The particular salts present in the water of a plastic clay are not well studied. Mr. Purdy argues that salts adsorbed by kaolin are the cause of deflocculation and thereby of plasticity. But his logic is not good. He quotes Bourry: "Kaolins do not retain more than 2 per cent. of carbonate of lime in solution, while plastic clays can absorb from 10 to 20 per cent. of it." Mr. Purdy claims that the cause of plasticity is salts adsorbed, but proceeds to show that the more plastic a clay is the more ability it has to adsorb salts. If both were true, the adsorption and plasticity would both soon be infinite. If the salts caused the plasticity of Bourry's clay, it would be less capable of adsorbing more salts than the lean kaolin. Again it is hard to conceive of the formation of a kaolin without production of all the salts needed. Purdy speaks of salts being washed away in the formation of kaolin, but shows that when a kaolin has been in contact with certain salts they cannot be washed away. The whole matter of adsorption was questioned from a scientific study, even before Mr. Purdy's proposal was published,* and as adsorbed salts are seldom the only ones present it seems best to omit that complexity and simply recognise the fact that the solution is variable. The molecular attraction will then vary, both with the nature of the solid and with the nature of the solution. It is frankly admitted that if such attraction is the basis of plasticity of clays, it is an extraordinary attraction, stronger than is found in other minerals.

The Colloid Theory of Plasticity.—Earlier work has shown quite definitely that the addition of colloids to a fine powder increased its plasticity. Colloids are so manifoldly variable in their properties that the discussion is in a state of extreme confusion. Since colloids can increase plasticity, it became of interest to determine their presence or absence in clays. The methods used are direct and indirect. Some are applicable to the discussion of plasticity and some are not. Ries† gives an excellent summary of the present state of the discussion. Very recent and elaborate experimental work was done by Stremme and Aarnio,‡ without special reference to the

* U.S. Geol. Survey, Bull. 312, page 64.

† "Clay, Occurrence, Properties and Uses," 1906, pages 99–103.

‡ Zeit. Prakt. Geol., XIX. 329.

study of plasticity. The direct methods are solution methods involving in various cases acids or alkalies, or both. The indirect methods involve an assumed relation between colloids and some physical property such as hydrolysis, osmosis, adsorption of salts and dyes, change from sol to gel form, shrinkage, and vapour tension. Stremme and Aarnio made a comparative study of the direct or solution method, Ashley's method of adsorption of dye, and Rodewald-Mitscherlich's hygroscopicity method. They concluded that the last was the best measure of colloids as developed by rock decomposition.

Attention being limited to those colloids which are related to plasticity, it is to be emphasised that the indirect and some direct methods measure colloids of other kinds. Silicic acid, when evaporated to form jelly, becomes viscous enough to affect plasticity. If this same solution is evaporated to dryness, it forms a glassy mass which act like quartz sand in that it injures rather than improves plasticity. Yet it still takes an organic stain, very strongly. A short series of tests indicated* that inorganic colloids all behaved as silicic acid, but that organic colloids, like gelatine, were capable of increasing plasticity, even after evaporation to dryness. Ashley threw doubt upon the conclusion by suggesting that probably the inorganic colloids would have returned to their active condition if time had been longer or if the mass had been ground wet. He did not report doing so. We have not succeeded. A most important fact is that clays do not need this long time or wet grinding to show notably high plasticity. We, therefore, emphasise the fact that some colloids have no beneficial effect on plasticity, and would question still further if any inorganic colloid can explain the effects found in clay. Indirect methods do not distinguish these two classes of colloids. Direct methods have not been well tested with this in mind. Nearly all the discussion of recent years, when thus simmered down, is based on a single test made by Th. Schloessing nearly forty years ago. The recent work on extraction of silica from clays by use of sodium carbonate† may prove of value, but its bearing is still uncertain.

Schloessing‡ washed 40 grams of clay with acid and then suspended it in slightly ammoniacal water and allowed it to stand 27 days. There remained 0·59 gram in the clear supernatant liquid with the properties of a colloid and composition almost like a clay.

We have selected some notably plastic clays for further experiments as follows :—

(1) 150 grams were wet, moulded, dried, extracted with warm water and filtered warm. The filtrate was evaporated, very slowly toward the end, but no colloid was found.

(2) The process was repeated with a modification in the first wetting, where agar-agar solution was used instead of water. The amount of agar added was 0·2 per cent. of the weight of the clay. In the final evaporation, the extract set to a very firm jelly, indicating that such organic colloids could be extracted by hot water.§

(3) Since this method of simple hot water extraction failed to reveal colloids in a natural clay, it was thought that Schloessing's treatment would best be followed in detail, but it was found that he did not report the detail of his method very fully. In the attempt to follow his work, 40 grams of plastic "Dakota" fire clay from northern Colorado were digested an hour in 5 per cent. hydrochloric acid, filtered, and washed with distilled water for six hours till most of the acid was removed. The clay was then suspended in 500 c.c. of water with an addition of about 5 c.c. ammonia (sp. gr. 0·9) and shaken thoroughly. After 27 days (the time given by Schloessing), not enough had settled clear to allow a test. The centrifuge did not help. After six months, a portion was removed and allowed to evaporate. The residue had the horny translucent appearance of a colloid. It cracked and was quite hard and adhered strongly to the dish, but it became soft very promptly when wet with water, even after thorough drying. The dry weight of colloid and any other matter from the solution was 1·47 grams from 40 grams clay. The colour was brown, indicating either organic matter or ferric colloid. Ignition gave an odour of organic matter, but the loss was only 0·27 gram, showing that the matter was largely inorganic. The ignited mass was coloured by some iron compound.

(4) A duplicate was treated in the same way as (3) with the omission of acid extraction. The colloidal matter was approximately one-fourth as great.

(5) A portion of the clear solution of each of the last experiments was evaporated to dryness, wet with an excess of water, filtered, and again evaporated to determine whether the colloid found would dissolve in water, after having been obtained by use of ammonia. About half of it went promptly into solution, and when dry again behaved as a colloid.

The interpretation of these results is not easy. Schloessing was evidently correct in reporting colloids present. We all knew they were present. But to find a colloid which will soften when wet, it was necessary to use alkali, or both acid and alkali. These are not needed to make a clay plastic ; pure water is sufficient. Still it is not unreasonable to think that some colloidal matter may be in the final form found in the last experiment—capable of softening but not dissolving without long standing in ammoniacal water. We find no reference to a detailed description of such a colloid in the literature, but it seems to exist.

It is noteworthy that the beneficial effects of colloids are not limited to plasticity but are to be studied in tensile strength of dry clay.

As a final argument let us call attention to the fact that using the finest powder obtainable from other minerals, with the most active colloids known, we have not succeeded in making that powder as plastic as common clay. If some one will find a more active inorganic colloid or succeed in making some non-plastic powder as plastic as clay by the use of colloids, the theory will be more acceptable. While our short series of tests failed, a longer series might change the conclusion. For the present we consider colloids a minor factor in the production of plasticity in clays.

Summary.—In summary, we find that the essential peculiarity of a plastic clay is the fact that the water used in wetting the clay is somehow rendered viscous. In explanation we have two well-known phenomena : molecular attraction and the action of colloids. Both are certainly present. Both are necessarily active. The calculation indicates that molecular attraction may be quantitatively sufficient, especially since the force is known to be variable and may be greater in clays than in any other mineral. Colloids alone would probably be quantitatively insufficient. No experiments have shown them capable of such effects in other mineral powders.



* W. Va. Geol. Survey, III.
† F. K. Pence, Trans. A.C.S., XII. 43-53.
‡ Compt. Rend., LXIX. 376, 473 (1874).
§ In previous work in this line reported in the West Va. Geol. Survey, Vol. III., we used a porcelain filter and found no colloid.

Empire Notes.

Clifton Jones, Ltd., have started business as pottery and glass importers and retailers at George-st., Brisbane, Queensland. Mr. P. Clifton Jones is managing director of the company.

V. H. Sparks & Co., of 144, Oxford-street, East London, Natal, won the first prize for the best window display of crockery during the recent East London Shopping Week with the display illustrated on this page. We congratulate them on their success, and thank them on our readers' behalf for thus giving us an opportunity of showing what excellent taste can be cultivated in such a distant part of the Empire.



A Prize-Winning Window : V. H. Sparks & Co.

Trade Openings in Canada.—A firm in Ontario, interested in the erection of a brick-making plant to cost $50,000 (about £10,250), will require electrically-driven machinery to manufacture plain wire-cut and pressed brick, and also hollow tiles and floor tiles. A Toronto firm desires to purchase supplies of floor and wall tiles, and is prepared to enter into communication with United Kingdom manufacturers. For further information application should be made to the High Commissioner for Canada, 17, Victoria-street, S.W., mentioning The Pottery Gazette.

Foreign Notes.

The Kinney and Levan Co., pottery and glass importers and merchants, late of 1427, Sixth Avenue, Cleveland, U.S.A., have erected extensive new premises at 1365-1385, Euclid-avenue, in the same city. This extension has been rendered necessary by the rapid growth of the business of the company, which has consistently gone ahead since it was started in 1883.

Glass Manufacture in Japan.—A member of the well-known Mitsubishi concern, Iwasaki, has just purchased a large piece of land at Tobata, in the Government of Fuknoka (at the eastern end of the Bay of Wakamatsu), with a view to the erection of a large glass factory. At first ten buildings are going to be erected, and the total expenses, including the purchase of the land, amount to about 2,000,000 yen. Operations are to be commenced at the beginning of 1914, and only window glass is to be blown meantime ; it is calculated that 20,000 cases (each of 100 sq. ft. of glass) will be produced monthly. The machinery for the factory (which is to be provided with its own tile-works, electrical power station and case factory) is to be obtained from America, to which country it is also proposed to export fire-proof tiles and bricks. The necessary sand is found in large quantities in the province of Wakayama. The demand for window glass is steadily increasing from year to year in Japan. Although the sliding partition walls of Japanese houses continue to be covered with oiled paper as before, fashion now demands that a broad strip of glass be inserted at least at a level with the face of a person sitting down. All the offices and other buildings will also be constructed entirely on European lines, and increasing quantities of glass will thus be used. Large quantities of window-glass continue to be imported, and, so far, home industry has not checked the trade at all, especially so as the native glaziers do not care to use it because its quality is much i nferior to that of the imported article, whilst the difference in price is only very small ; Japanese glass costs 7 yen per case, whilst 7 yen 50 only are asked per case for the foreign make. Hitherto window-glass has only been made in the Asahi Glass Works at Amagasaki, near Osaka, which produces about 100,000 cases per year. Consequently, when the new concern at Tobata is completed the total Japanese output will be about 350,000 cases, or, approximately, the half of the present (but

steadily advancing) Japanese demand. Any attempt at exportation is not intended, first of all because of the protective duty in the Eastern Asiatic market, and secondly because Belgian competition is too strong. In the near future, however, the end of foreign window-glass of medium and low quality as an imported article will be reached in Japan. The workmen will soon improve, and the Japanese Government would rather increase the import duty than let these large home undertakings go under. As regards plate-glass for shop-windows, and so on, which are cast and not blown, Japan will continue to be a good growing market, as it will be a very long time before Japan is able to compete with foreign countries in the complicated processes of production required fer these large plates of glass.

Glass and Pottery in Roumania.—(From a Continental Correspondent.)—The factories of the Jassy official district existing at Lespezi, Maxni, Solontzi and Nogulesci, produce hollow and pressed glassware of inferior quality; for ornamental and decorative goods they are very poorly equipped. In spite of the high protective duty, the profit realised is very small, and these factories have thus been compelled to form a syndicate. Most of the glass-blowers are Austrians, from Bohemia and Galicia, who are paid, relatively speaking, high wages. The raw material used is procured mostly from Galicia and Hungary. The ceramic industry possesses a factory at Medgidia, employing about 8 to 10 hands, which produces chiefly roofing tiles, drain pipes and other building tiles; last year the output was valued at about 250,000 lei. The production is nearly all sold in Roumania itself. Roumania also possesses several brick kilns fitted with the most modern plant and machinery; one of the most important is the "Ciurea" kiln at Jassy, belonging to the State Railway Board; it possesses a motive power of 90 h.p., and employs in the season 150 hands. The Roumanian glass industry is now represented by five factories, viz., Azuga, Negulesci, Lespezi, Maxni and Solontzi, four of which lie in the Moldau district. As stated only the coarser and cheaper lines of goods are produced; undoubtedly the Roumanian factories have made progress in many directions (for instance, in pressed glass goods and lamp chimneys), but, upon the whole, the imports of foreign glassware still continue large, and would be still more important were it not that the protective duty favours the sale of home-made goods. Hence Austrian and Bohemian competition in glassware continues unabated in such decorated and coloured glassware as lamp-shades, tumblers, wineglasses, sugar-basins, preserve dishes and the like. German competition in similar goods is also increasing. The window-glass factories opened in Roumania have all had to close their doors, and it will doubtless be a long time before any further attempt is made to recommence its manufacture locally. Window panes are now obtained largely from Germany, but the best kinds come from Belgium. Hungary has also begun to compete with success in the supply of this article. Plate glass is not yet made in Roumania, but is procured mostly from Belgium and Germany; coated plate-glass, for making mirrors, however, is no longer importable from abroad, as there are several factories (one very important one at Bucharest) in the country which silver all the glass required for the purpose. There are also two fairly large factories at Jassy, and they are well employed throughout the year. Bottles have a very important sale, and very good business is done by Bohemia. The best buyers are the numerous soda-water and mineral water factories and breweries. A bottle factory has now been opened close to Turn-Severin. In crystal-glass goods it is found impossible to oust foreign competition, in spite of the numerous imitations made in Roumania. French factories do the most business in this article. Due to the increasing use of electricity for lighting purposes in towns and industrial establishments, the imports of electric bulbs and lamps are steadily increasing, Austria and Germany being the chief sources of supply. In china and crockery ware business is good, china doing especially well. Majolica fancies also have a good sale. In crockeryware various attempts have been made to improve home production, but the lines produced continue to remain of inferior quality, so that Germany and Austria are still able to retain their position as the chief sources of supply.

Trade Notes.

The Editors are always glad to receive items of trade intelligence such as removals, new premises, personal items, &c.; also marked local newspapers.

Mr. H. J. Gasson, J.P., glass and china dealer, Rye (Sussex), who was Mayor of the ancient borough in 1903 and 1904, has been elected an Alderman of the Corporation.

The death took place on Oct. 21 of Mr. Jas. Morcom, St. Stephens, well known in the Cornish china clay industry as the only surviving original founder of the Bloomdale China Clay Co., of which concern he remained a partner up to the time of his demise. He was 84 years of age.

Mr. Wm. Robinson, Oaklands, Bovey Tracey, managing director of the Bovey Tracey Potteries, is one of the new magistrates appointed for Devonshire. Mr. Robinson has been Chairman of the Bovey Tracey Parish Council and has also served on the Newton Abbot Board of Guardians and Rural District Council.

British Clay Exports for the nine months ended September were as follows:—China clay, 474,989 tons (£558,263); fireclay, 43,082 tons (£37,223); other sorts, 62,464 tons (£52,450). Exports for the corresponding nine months of last year were:—China clay, 494,543 tons (£554,667); fireclay, 34,228 tons (£27,344); other sorts, 56,503 tons ($43,893).

Another "Bull in a China Shop."—Serious damage through the vagaries of a bullock was done on Oct. 15 at the glass and china establishment of Mr. R. S. Carey, Northgate-street, Bath. The animal walked into the shop and overturned tables and stands on which valuable stock was displayed, and the damage done is estimated at between £40 and £50.

The death occurred on Oct. 14 of Mr. Samuel Cutler, Neuville, Codsall, near Wolverhampton, a well-known figure in the glass trade. He served his apprenticeship at the Spon-lane works of Chance & Co., glass manufacturers, and afterwards became their agent on the Horseley Fields business being established. He carried out many contracts for ornamental glass in public buildings. Deceased was in his 80th year.

Mr. Isaac Holling, who passed away on Oct. 12 from pneumonia and complications, after a short illness, was for many years in business as a glass and china dealer in Grange-road and High-street, Shanklin (Isle of Wight), and previously controlled large businesses at West Bromwich and Birmingham. He was 74 years of age, and had served on the Local Board and Urban Council, and became Chairman of the latter body. For some years he also represented the town on the Isle of Wight County Council.

Fox, Roy & Co., Ltd., Plymouth, write to correct the wrong impression which might be conveyed by the last paragraph of the article in our issue of Sept. 1, dealing

with some South Devon china shops. They emphasise the fact that they have no retail department whatsoever. They are largely interested in the sale of potters' materials and glass-makers' chemicals; also, to some extent, in indents for the pottery export trade, but have no retail trade, neither is it their intention to interest themselves in it.

Wills and Estates.—M. Louis Marc Emmanuel Solon, of The Villas, Stoke-upon-Trent, left estate of the value of £13,779.——Mr. George Tinworth, of 8, Maze-road, Kew, the well-known sculptor and modellist, left estate of the value of £549.——Mr. Henry Spencer Daniell, of Avenue End, Elsworthy-road, Hampstead, N.W., who died on Aug. 17, aged 60, left estate of the gross value of £62,616, with net personalty, £56,604.——Mr. H. C. Osler, of Burcot Grange, near Bromsgrove, and Birmingham, chairman of the firm of F. & C. Osler, Ltd., flint glass manufacturers, left estate to the value of £69,029.

Fires.—A fire occurred on Sept. 26 at the pottery works of S. & E. Collier, Ltd., Grovelands, Reading, early in the morning. The outbreak was discovered in a large structure used as a drying shed, and which was the first building erected in 1877 when the new works were constructed. At the time of the outbreak it contained a large quantity of goods, and all the firemen could do was to save the adjoining machine house. In this they were successful, but the drying shed was completely destroyed. The cause of the outbreak is unknown.——An outbreak of fire occurred on the evening of Oct. 21 at the works of Mr. C. H. Brannam, Royal Barum Pottery, Litchdor-street, Barnstaple. The outbreak originated in a large shed at the rear of the works, and to this the flames were fortunately confined. The damage done is covered by insurance.

Window Dressing Competitions.—At Ashford (Kent), on Oct. 16, the Chamber of Commerce held a window dressing competition in connection with a shopping week, and members of the glass and china trade participated and made some excellent displays. That of Mr. A. W. Howard, New Rents, was awarded the third prize in the class in which house furnishers were included.——At the recent shopping week arranged by the Tunbridge Wells Tradesmen's Association, Mr. Frank Featherstone, of 9, Grosvenor-road, was awarded second prize for his window display. The first prize was awarded to a furnisher's window, there being a large class in this section. Mr. Featherstone informs us that it was the means of getting a great many people to view windows and has been a splendid advertisement, and good results have followed. We are always pleased to hear of pottery and glass firms' successes in this kind of competition, and are open to receive photographs of the prize-winning windows.

Glass Articles as Wedding Gifts.—The problem of choosing wedding presents is often a perplexing one, and the widening of the "scope" of selection will be generally welcomed. During recent times a "taste" has grown, particularly in connection with weddings in high social life, for making gifts of cut or other decorated glass, and there are many indications that the change is rapidly increasing in popular favour. "There has during the last two years or so been an increasing demand for cut glass for wedding and other presentation purposes," was the reply made by Mr. Hubert S. Williams-Thomas, a director of Stevens & Williams, Ltd., Brierley Hill Glass Works, to a "Stourbridge County Express" representative, who sought information on the point. "Mostly, the gifts take the form of salad bowls, water sets, and table decorations. There is a great revival in the demand for glass candlesticks used mainly in conjunction with electric light. Under artificial light richly cut glass is much more attractive than silver ware."

The Pottery & Glass Trades' Benevolent Institution.—We beg to remind our readers that the annual festival dinner of the Benevolent Institution will take place at the Whitehall Rooms, Hotel Metropole, London, on Tuesday, Nov. 18, 1913. The Most Honourable the Marquis of Crewe, K.G., P.C., will take the chair, supported in the vice-chair by Mr. H. M. Robinson (Mintons, Ltd.). Since the last dinner was held His Majesty the King most graciously honoured this Institution by becoming the Patron. The Festival Dinner Committee feels that the most practical way to commemorate so important an event, and show the trades' appreciation of Their Majesties' encouragement, will be by contributing a record amount of funds to the Institution on this auspicious occasion. Contributions and application for tickets for the dinner will be most gratefully received at the head office of the Institution, 3, Dyers'-buildings, E.C. The dinner is being organised by a representative and influential committee, with Mr. Ernest C. Goode as chairman, and its success appears to be already assured.

Pottery Traders at Golf.—During October a golf match was played at Rudyard between London and Staffordshire. Eight members of the London pottery and glass Trades' Golf Club played a like number of pottery golfers for a very fine challenge cup, presented by. Mr. John Aynsley. The members of the team were as follows:—London: Messrs. J. J. Adams, P. Brooks, G. D. Francis, A. E. Edis, H. Green, C. E. Green, J. E. Heath, J. Kendall. The Potteries: Messrs. Allerton, John Aynsley, J. C. Bailey, C. H. Bowers, Broadhurst, A. B. Jones, C. Jones, W. H. Robinson. The match was played on the 19th, singles in the morning and foursomes in the afternoon, and resulted in a win for Staffordshire by three-quarter points. In the single matches they won $4\frac{3}{4}$ points to $3\frac{1}{4}$, one point being allowed for a win, and a quarter for the bye. In the foursome London won $2\frac{1}{2}$ points to 2. The weather being glorious, and the course in fine condition, a most enjoyable day was spent, a large number of well-known Pottery manufacturers assisting in entertaining the visitors. The London party stayed at the Old Manor, which is now used as a club house.

London China Packers' Wages.—At a sitting of the Alien Immigration Board on Oct. 8, a young Jew, a china packer by trade, applied for permission to land, as he had left Russia to avoid military service. He could not speak English, and had no money, but produced a letter from an East End china merchant, saying that he might give him a job. The inquiry officer told the Board that he had interviewed the china merchant in question, who said that men like the immigrant were better for him than London men. He instanced the case where one of his employees was only paid £1 per week, whereas the man's services were worth 30s. His record of wages showed that one man, who appeared to be a foreman, received 30s. per week, and five others respectively 20s., 17s., 17s., 15s., and 12s. 6d. per week. They appeared to be men of about 18 or 19 years of age. The merchant, when called, explained that he wanted the foreigner, because foreigners worked better than Englishmen, and wanted less money. He offered to sign an agreement to give this man 17s. 6d. a week for the first three months, and £1 a week for the second three months. The Board allowed the applicant to land.

Lead Poisoning in the United Kingdom.—The total number of cases of lead poisoning reported to the Home Office under the Factory and Workshop Act during September, 1913, was 31, of which 1 was fatal. In addition, there were 47 cases of lead poisoning (5 of which were fatal) reported among house painters and plumbers. During the nine months ended September, 1913, the total number of cases of lead poisoning reported under the

Factory and Workshop Act was 404, as compared with 431 during the corresponding period of 1912. The number of deaths was 16 in 1913, as compared with 34 in 1912. In addition, there were 222 cases of lead poisoning (including 29 deaths) among house painters and plumbers in the first nine months of 1913, as compared with 185 cases (including 33 deaths) in the corresponding period of 1912. Of the 31 reported cases of lead poisoning in September last under the Factory and Workshop Act, there were 2 cases in connection with the china and earthenware trades, 1 of the persons affected being a female. During the nine months ended September, 1913, there were 49 reported cases, and 7 deaths in our industries as compared with 58 cases and 13 deaths during the corresponding period of 1912.

The Shops Act.—A draft order for glass and china dealers at Blackpool was issued by the Town Council on Oct. 10, and provides for closing during the following periods of the year :—From the Thursday after the second Wednesday in October until Dec. 15, from Jan. 1 until the Tuesday before Easter Day, and from the Thursday in Easter week until April 30. The scheduled hours of closing are :—Monday, Tuesday, and Thursday, 7.30 p.m. ; Wednesday, 1 p.m. ; Friday, 8 p.m. ; Saturday, 10 p.m. If Saturday is selected for the half-holiday, the closing hour on Wednesday is to be 7.30 p.m. Objections or suggestions relating to the order must be sent before Nov. 15 to the Town Clerk, Mr. T. Loftos.——An order for glass, china, and earthenware dealers in the Birkdale area of the Borough to close on Tuesday at 1 p.m. has been issued by the Southport Town Council.——The Bedwellty Urban Council on Oct. 10 issued a draft order for glass and earthenware dealers in the Sirhowy Valley area of the district to close at 7 p.m. on Monday, Tuesday, and Wednesday ; at 1 p.m. on Thursday ; at 9 p.m. on Friday ; and at 10 p.m. on Saturday, with midnight on Saturdays preceding bank holidays. Objections or suggestions relating to the order must be sent to the Clerk, Mr. T. J. Thomas, 36, High-street, Bargoed, before Nov. 15. ——At Grays (Essex), as the result of a local inquiry, a vote of the glass and china trade is to be taken respecting the order for half-holiday and general closing.——On Oct. 17 a draft closing order for glass and china dealers at Matlock (Derbyshire) was issued by the Urban Council, and objections or suggestions relating to the order must be sent to the Clerk, Mr. R. Taylor, before Nov. 17. The closing hours scheduled are :—Monday, Tuesday, and Wednesday, 7.30 p.m. ; Thursday, 1 p.m. ; Friday, 8 p.m. ; and Saturday, 10 p.m. If Saturday is selected for the half-holiday the closing hour on Thursday is to be 7.30 p.m.—— Stoke-on-Trent Corporation Watch Committee, on Oct. 16, decided to issue a draft order for glass, china and earthenware dealers in the Borough to close at 8.30 p.m. on Mondays and Fridays, 8 p.m. on Tuesdays and Wednesdays, 1 p.m. on Thursdays, and 10.30 p.m. on Saturdays, with total exemption for the six week days prior to Christmas Day, Whit Monday, and the Stoke Wakes week, and the Monday and Tuesday in the Wakes Week, on the day preceding any other day of public rejoicing or mourning, and on the day preceding Good Friday.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette," and are strictly copyright.

Mr. John P. Briscoe is opening a china business at 20, Greenway-road, Runcorn.

Rust Bros., glass and china merchants, opened premises at 49, Woodside Green, Croydon, on Oct. 18.

Mr. Batten, glass and china dealer, announces that he is vacating his premises at 52, Knowsley-st., Bolton.

M. Thomas & Co. have opened a glass, china, and earthenware business at 31, Bradford-road, Idle (Yorks.).

Mr. James White, of 12, Cathcart-street, Ayr, is about to open new premises in Ayr for the wholesale and retail pottery trade.

Mr. Edward Smith, glass, china and earthenware dealer, announces that he is giving up the business he has carried on at 197, Manchester-street, Oldham.

The business of the Burslem and Tunstall Fire Clay Co., Ltd., has been taken over by the Scotia Bank Fireclay Co., Ltd., of Burslem, who will carry it on under their own name.

James Howell & Co., Ltd., Cardiff, have removed their glass and china business from High-street to new premises at the corner of Wharton-street and The Hayes. The new premises are to be opened on Nov. 3.

Mr. C. E. Bevington, of Union Bank-buildings, Ely-place, E.C., who recently removed from Buchanan-buildings, asks us to announce that he still represents Deans (1910), Ltd., Burslem, in addition to other firms.

James Green & Nephew, Ltd., are vacating the premises at 107, Queen Victoria-street, E.C., which they have occupied for nearly 40 years. Their retail department is being removed to 117, Queen Victoria-street, E.C., and they have also taken a large warehouse in Upper Thames-street. During October the company held a very successful removal sale.

CONTRACTS OPEN.

The Port of London Authority invites tenders by Nov. 5 for glass and glassware for a year from Dec. 31. Forms of tender (No. 34) can be obtained from the Stores Superintendent, 106, Fenchurch-street, E.C.

Tenders are invited by Nov. 11 by the Sanitary Committee of the Leeds Corporation for the supply for a year of crockery to the hospitals at Seacroft and Killingbeck. Tender forms can be obtained from Mr. E. Fox, Town Clerk, 26, Great George-street, Leeds.

Tenders are invited for the supply of silica and fireclay goods during the next 12 months by the Sheffield United Gas Light Co. Forms of tender can be obtained from Mr. J. W. Morrison, engineer, Commercial-street, Sheffield, and should be returned to Mr. H. Thomas by Nov. 4.

TENDERS ACCEPTED.

For the Bath Guardians :—Mr. S. D. Kennard, earthenware.

For the Coventry Guardians :—Mr. W. Berry, earthenware.

For the Holborn Guardians :—Crockery ware, Mr. W. Huntsman.

For the Wirral Guardians :—Mr. Prentice, Neston, earthenware.

For the Cambridge Guardians :—Mr. A. Livermore, crockeryware.

For the York Guardians :—Mr. R. Brown, Swinegate, crockeryware.

For the Keighley Guardians :—F. & S. Feather, Keighley, crockeryware.

For the Whitby Guardians :—Mrs. Thornton, Whitby, glass and china.

For the Epsom Guardians :—Mr. G. Snashall, Epsom, earthenware, £36 16s. 6d.

For the Uckfield Guardians :—Mr. A. Arter, Lewes, lamp glasses, 1s. 10d. doz.

For the Wrexham Guardians :—Earthenware, Mr. C. W. Armstrong, £19 1s. 10d.

For the Birkenhead Guardians :—Mr. O. Pegg, Birkenhead, crockery for one year.

For the South Stoneham Guardians :—Payne & Son, Southampton, earthenware.

For the Chester Guardians :—Mr. F. Richardson, Chester, crockery, £14 13s. 2d.

For the Maidstone Guardians :—Jacobs' Stores, Maidstone, crockeryware, £16 8s. 6d.

For the Runcorn Guardians :—Mr. E. Sherratt, Runcorn, earthenware for six months.

For the Mile End Guardians :—Mr. D. Shepherd, Whitechapel, earthenware, £136 11s.

For the Helston Guardians :—Eddy & Sons, glass, &c. ; W. T. & E. C. Pengelley, earthenware.

For the Shoreditch Guardians :—Mr. W. Huntsman, 41-3, Upper-st., Islington, earthenware.

For the Burton-on-Trent Guardians :—T. Netherland & Co., Ashby-de-la-Zouch, earthenware.

For Southampton Guardians :—J. J. Davies & Sons, Ltd., Above Bar, Southampton, earthenware.

For the Hereford City Health Committee :—The Worcester House, Ltd., Hereford, china for six months.

For the Thanet Guardians :—Mr. Lednor, Ramsgate, crockery (workhouse), £13 14s., (cottage homes) £4 1s. 9d.

For the Tendring (Essex) Guardians:—Lewellen & Co., Clacton-on-Sea, glass and china ; Mr. W. Cheshire, Colchester, gas globes.

For the L.C.C.—Earthenware, &c., of leadless glaze, Wm. Adams & Co., Tunstall, items 1 to 50, £1,711 ; J. Bourne & Son, 34, Holborn-viaduct, E.C., items 56 (small size), 57 (cream and brown pattern), and 58 to 63, £62.

Contracts let in Victoria by the Commonwealth or State Governments :—Post and Telegraph : The foregoing for N.S.W. :—T. Zwicker & Co., 30,000 por. insulators, sizes, 2·6d. to 7·35d. each ; 1,500 por. tubes, 6s. 3d. 100 (for Tas.). Brunswick B.T. & P. Works Co., Ltd., 21,849 earthenware conduits (2 duct), 1s. 11½d., (3 duct) 2s. 2¾d., (4 duct) 2s. 5¾d. each.

For the Medway (Kent) Guardians :—Mr. C. J. Sims, 10 in. plates, £1 19s. gross, 7½ in. £1 8s. 6d., 7 in. do., £1 3s. 6d., chambers £4 7s. 6d. gross, bed-pans £1 16s. doz., commode pans £1 1s. 6d. doz., feeding cups 7s. 11d. doz., 8 in. pudding basins 3s. 9d. doz., 7 in. 3s. 11d., 6 in. 2s. 7d., egg cups 5s. 11d. gross, hot-water jugs 18s. 6d. doz., three pint teapots 18s. 6d. doz., one quart do. 16s. 6d., one and a-half pint do. 13s., one pint do. 12s., mustard pots 3s. 9d. doz., vinegar bottles 3s. 9d. doz.,; Thornton Bros., basins £1 3s. doz., 8½ in. bowls 3s. 9d. doz., 7½ in. do. 3s. 1½d., 6½ in. do. 2s., quart mugs £2 5s. gross, pint do. £1 4s. 8d., spit porringers £3 7s. gross, 11 by 9 in. oval pie dishes 5s. 7d. doz., 10 by 8 in. do. 4s. 7½d., 9 by 7 in. do. 3s. 10d., slop basins 4s. 3d. doz., breakfast cups and saucers 3s. 5d. doz., tea do. 2s. 9d., cream jugs 8s. doz., tea plates 2s. 3d. doz., bread and butter plates 4s. 3d. doz., toilet sets £3 doz., three pint earthenware jugs 4s. 9d. doz., two pint do. 4s., one pint do. 2s. 9d., 14½ in. meat dishes 8s. 6d. doz., 13 in. do. 6s. 11½d., 11½ in. do. 5s. ; 10½ in. plates 2s. 3d., 9 in. do. 2s., vegetable dishes 14s. 9d. doz., butter coolers 4s. 3d. doz., pepper bottles 5s. 6d. doz., salt cellars, 10s. gross, sugar basins 3s. 6d. doz., tumblers 1s. 3d. doz., water bottles and glasses 4s. doz., wine glasses 2s. doz., glass urinals 5s. 9d. doz., 5½ in. glass oval dishes 1s. 10d. doz., 6½ in. do. 2s. 3d., 7 in. do. 3s. 1½d., 8½ in. do. 4s., 9½ in do. 5s. 3d., 10½ in. do. 7s. 6d., 5½ in. round glass dishes 2s. 3d., 6½ in. do. 2s. 6d., 7 in. do. 3s. 6d., 8½ in. do. 4s. 9d., 9½ in. do. 5s. 7½d., 10½ in. do. 9s. 9d., half-pint mugs £1 3s. gross.

NEW COMPANIES, COMPANY REPORTS, &c.

St. Austell China-Clay Works, Ltd.—The report for the half-year ended June 30 last shows a profit of £810, from which the directors have set aside £483 for redemption of debentures, and, after providing for debenture interest, declared a dividend at the rate of 7 per cent. per annum on the preference shares on account of arrears.

Nuttall & Co. (St. Helens), Ltd.—Rd. No. 131,368.—This private company has been registered with a capital of £1,000 in £1 shares, the objects being to take over the business of glass bottle manufacturers carried on by Nuttall & Co. (St. Helens), Ltd. (now in liquidation) at St. Helens, and to adopt an agreement with the United Glass Bottle Manufacturers, Ltd. The subscribers are : F. R. Dixon-Nuttall and W. F. Dixon-Nuttall, both of Ingleholme, Eccleston Park, Prescot. Registered office : Ravenhead, St. Helens.

Cannington, Shaw & Co., Ltd.—Rd. No. 131,200.—This private company has been registered with a capital of £1,000 in £1 shares, with the object of carrying on the business of glass bottle manufacturers carried on by Cannington, Shaw & Co., Ltd. (now in liquidation) at St. Helens, Lancs., and to adopt an agreement with the United Glass Bottle Manufacturers, Ltd. The subscribers are :—J. S. Cannington, 20, Exchange-chbrs., Liverpool, and W. L. Shaw, Sherdley Glass Works, St. Helens, who are also first directors together with T. Killey and J. Shaw. Registered office : Sherdley Glass Works, St. Helens, Lancs.

Anglo-American Patent Bottle Co., Ltd.—Rd. No. 131,348.—With a capital of £80,000 in £1 shares, this company has been registered to take over the business of the N. R. Capsule Syndicate, Ltd. (incorporated Dec. 3, 1907), to acquire letters patent, brevets d'invention, concessions, licences, inventions, rights and privileges subject to royalty or otherwise, whether exclusive or non-exclusive, or limited, or any interest therein, to carry on the business indicated by the title, and to adopt an agreement with the said N. R. Capsule Syndicate, Ltd., the Wilson Distilling Co., H. Ellis, John Walker & Sons, Ltd., and Robert Brown, Ltd. Registered office : 79, Mark-lane, E.C.

Liens, Debentures, Satisfactions, &c.—Godwin (William) & Son (Lugwardine Tileworks) Ltd., Withington (Hereford).—Registered, £4,000 mortgage, to F. T. Carver, 44, Bridge-street, Hereford, sol. and ors. ; charged on freehold, Lugwardine Tileworks, with manager's house, 2 cottages and land, Withington (Hereford).——Pencoed & Dinas Powis Brick & Tile Co., Ltd. (late Pencoed Terra-Cotta Brick & Tile Co., Ltd.).—Registered mortgage securing all money now due or to become due to London & Provincial Bank, Ltd. ; charged on freehold hereditaments in Pencoed.——Great Halviggan China Clay Co., Ltd., Hanley.—Reg. £2,200 mortgage, to H. L. Caunter, Liskeard ; charged on freehold farm, Methrose, Trewoon, St. Mewan.

Pottery and Glass in British N. Borneo.—Of the imports of glassware, the United Kingdom accounts for 50 per cent., but Germany is slowly gaining ground. As regards earthenware and crockery (32 per cent. from the United Kingdom), China is the chief competitor. The bulk of the population being Chinese, naturally the tendency is to favour the sale of Chinese articles, but this is only on account of cheapness, and the fact that the goods are more adapted to Chinese tastes.

Denmark's First Glass Works.—According to "Bruhn's Fachblatt," the first glass works to be set up in Denmark has been erected by the Aktieselskabet Kronborg Dansk Vindues Glaswaerk, at Elsinore, near Copenhagen. The establishment of the company is stated to have been attended with considerable difficulty, owing to the opposition of competitors in neighbouring countries. The works employ 70 glass blowers and others, working day and night shifts of eight hours each. The large blastfurnace has a capacity of nearly 200 tons of glass metal, and the daily output of window glass is 10,000 square feet.

Fragments.

¶ Subscribers' remarks in sending renewal subscriptions: "We have found THE POTTERY GAZETTE very useful to us."——"Everybody in the pottery and glass trade who does not see THE POTTERY GAZETTE is standing in his own light."——"I have great pleasure in forwarding P.O. 7s. 6d. for THE POTTERY GAZETTE, which I find very useful."——"This is a most useful and interesting paper; I have read it regularly for a number of years, and always find something new in its columns."——"I find it a good investment."

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¶ THE POTTERY GAZETTE DIARY for 1914 has now been distributed, and we have received many courteous acknowledgments, some of which we quote:—"I must thank you for the beautiful Diary you have sent me."——"I find it more than pays the subscription by helping me to trace firms."——"I beg to thank you for the 'Diary and Trade Directory for 1914,' and I must say I was very pleased with same."——"To be connected with the pottery industry and be minus the real guide and friend that the DIARY is, is to be like the man trying to drive a horse without reins."——"With many thanks for your fine Diary and Trade Directory (from Italy)."

* * *

¶ It is to be hoped that none of our readers have incurred censure for neglecting the opportunities afforded by the new U.S. Tariff (p. 1290). They would have all the less excuse, as we have kept them fully advised of the progress of the Tariff Bill.

* * *

¶ The Acting British Consul-General at New York reports a big demand for mourning bands. Are these to be worn by members of the Trusts who have been hit by tariff reductions?

* * *

¶ The recipients of the awards on p. 1278 will be ready to compose a new version of "How they brought the good news from Ghent."

* * *

¶ In connection with the proposals for the electrical treatment of lead poisoning (p. 1277), we are reminded that a clever doctor once told us that the chief use of electricity in medical work was for the detection of malingering.

* * *

¶ The following story appeared recently in "The Lancet":—A man who had been sitting on the damp grass for some hours writing with a lead pencil and frequently sucking the point thereof while waiting for inspiration, eventually felt a sharp pain in his loins. He limped to a local quack. After questioning him as to the onset of the attack, the quack simply said "Plumbism." The man received some yellow pills, paid the fee, and went away. He was a studious person, and searched the encyclopædia for the meaning of "plumbism" and what lead pencils were made of. The next day he returned to the quack and said: "You told me I had 'plumbism,' which is lead poisoning, and I now find there is no lead in lead pencils, only graphite or plumbago." "Oh," replied the quack airily, "did I say plumbism is the cause of your lumbism? I meant to have said plumbago is the cause of your lumbago." "Oh," said the man, "but, anyhow, your pills are only bread." "Of course, of course," replied the quack; "don't you know that bread is the oldest and finest thing to remove pencil marks with? You didn't want me to give you india-rubber pills, did you?"

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

THE hope which was entertained of a brisk "fall" trade, such as would compensate for the preceding dulness, has been abandoned, for it is now too late for a recovery. The slight improvement over the flatness of the holiday season which it was possible to report last month has been maintained, but that is all that can be said to the credit of the present trade conditions. Any marked revival which might have been expected following on that slight improvement has certainly not been realised. Business is quiet all the way round; practically the same state of affairs prevails in all branches of the potting trade, and to home and export markets alike. A few firms have plenty of orders on their books, and are fully occupied, but one swallow does not make a summer, and the active employment of one or two firms does not make business other than quiet generally. There is no very special depression to record, but there is in every market a lack of buoyancy and a want of confidence which is very discouraging at the period of the year which should be brisk beyond any other.

This time last year there was a spirited demand from practically all the oversea markets; indeed, the last quarter's business contributed very largely to making a record year's shipments. The dull conditions now prevailing are, therefore, the darker by contrast with that brisk period. The worst feature of the export trade is the falling off in business with the Colonies, whose demand has for so long made an excellent standby, compensating for the slackness of the American and certain other foreign markets. The Canadian business is at a lower ebb than it has been for eighteen months. Of course the winter season is at hand, when shipments are generally at a lower level, but that is not the cause; it is more likely to be found in the monetary stringency under which the Dominion is suffering. The prolonged trouble in the Balkan Peninsula has had, and is still having, a far-reaching effect on the money markets of the world, and the present unsatisfactory financial conditions come at an unfortunate time for Canada, for her resources are locked up in her broad acres, whose development means so much not only for the Dominion, but for the whole world, and this country in particular. Trade with the Antipodes and with South Africa continues dull, and the financial condition of South America, and especially Brazil, seems to bode ill for the future of that important market.

At last the United States tariff measure is in operation, and it is assuredly full time, for the whole year has been overshadowed by it, and the American trade retarded in consequence. There was first the anticipation of the Bill, then its introduction, and, after that, a seemingly interminable discussion over its provisions in the two Houses. The pottery schedules have come through the fire of senatorial debate scatheless, and English manufacturers now have the opportunity of enlarging their operations with a considerable advantage in the matter of earthenware, but little in the case of china. The principal tariffs now in operation are as follow:—China and

porcelain wares and all bisque and parian wares, undecorated, 50 per cent. ad valorem (previous rate 55 per cent.); ditto, decorated, 55 per cent. (previous rate 60 per cent.). Earthenware and crockeryware, including white granite and semi-porcelain earthenware, undecorated, 35 per cent. (previous rate 55 per cent.); ditto, decorated, 40 per cent. (previous rate 60 per cent.). Common yellow, brown or grey earthenware and common salt-glazed stoneware, undecorated, 15 per cent. (previous rate 25 per cent.); ditto, ornamented, incised or decorated in any manner, 20 per cent. Rockingham, 30 per cent. (previous rate 40 per cent.).

At the time of the introduction of the measure it was anticipated that it would have become law about July last, in which case the reductions would doubtless have benefited our "fall" trade considerably. As it is, the passing of the Bill has come too late to affect this year's business, and the spring trade has now to be looked to for any marked improvement. Orders are coming along more briskly from the States, but they are mostly for forward delivery. During December and January a considerably improved demand is expected, so that early next year the shipments to America should be on a much higher level. Manufacturers are not now expecting the boom which, at the time of the introduction of the measure, many thought would result; the world's trade is not so buoyant as it was then. But business in the States has for so long been "hung up" in view of the drop in tariffs, that there must be a considerable demand to be supplied, and we can certainly rely on the manufacturers of the Potteries securing their share of the increased business that must accrue. It is, of course, unfortunate that our china manufacturers are not to have the same opportunities as earthenware producers, but the explanation of the disparity, as I explained some months ago, is that American potters have a greater fear of German and French china, which competes with the good class earthenware, than they have of English earthenware and semi-porcelain. This disparity of tariff reductions has one immense advantage to English earthenware manufacturers; it will enable them to compete favourably against the Continental china which, by its cheapness, threatened the market for good-class English earthenwares.

The returns of the North Staffordshire Railway Co. are a fair indication of the trade of the district, though, of course, it is impossible to separate the value of pottery goods or materials carried from minerals and other merchandise. For the three weeks of October ending on the 19th—these being the latest returns available—the total of the company's receipts was £62,810, as against £63,660 in the same period of last year, a very considerable decline. So far as these figures indicate the bulk of goods carried, the decline is even greater, because it has to be remembered that considerably higher railway rates are now in operation than at this time last year. Taking only goods train traffic and canal tolls, the three weeks' total is £46,910, as against £47,660 in the corresponding period of last year. Still dealing with goods train traffic and canal tolls, it appears that in the first week of the month—ending Oct. 5—there was a slight increase over the same week of last year, but in the two succeeding weeks that increase was much more than wiped out by heavy decreases. The following are the totals for the three weeks of goods train traffic and canal tolls:—Week ending Oct. 5, £16,020, compared with £15,800 in the same week of last year; week ending Oct. 12, £15,150, compared with £15,730; week ending Oct. 19, £15,740, compared with £16,130. With regard to employment in the potting trade, it appears to be fairly good, and the number disengaged not excessive.

The strike of clay workers in Cornwall has terminated, but as regards the Potteries the position is practically no better than it was a month ago. The men have returned to work without gaining anything, and for the time being the mine owners have won a victory. In the opinion, however, of those in this district who are best acquainted with the position of affairs in Cornwall, the settlement is hardly likely to be permanent. The workers' organisation was too young for them to stand a chance of succeeding, despite the determined fight they set up, but this fruitless contest is likely to spur them on to amalgamation; and when they are at length adequately organised another contest of strength seems certain to result. So far as the Potteries is concerned, however, it is a matter for gratification that the mines have been reopened, and though the new supplies which have reached the Mersey are as yet negligible in quantity, the resumption of work, of course, promises a relief of the existing tension. Some considerable time, however, must elapse before the supply overtakes the demand, for at a modest computation 200,000 tons of the year's output from Cornwall has been lost as the result of the stoppage.

Potters, paper manufacturers, and cotton manufacturers are clamouring for china clay; customers who take infinitely more clay from Cornwall than do the Staffordshire potters are insistent in their demands, and so the manufacturers here will for some time have to be content with what they can get. I learn from local clay merchants that the mine owners in Cornwall are "packed up" with big orders from American and Continental customers, as well as from potters outside this district, and that only an occasional barge is getting through to the Mersey ports for Staffordshire manufacturers. So far as it is possible to ascertain, none of the factories here have been actually stopped for want of china clay, but many manufacturers have been greatly inconvenienced, especially the smaller ones, who do not carry big stocks at Runcorn or any of the other ports on the Mersey; and they undoubtedly have been "living from hand to mouth." Most of the big firms, however, still have some stocks remaining. But for the fact that the strike developed during the holiday season, and that the subsequent period of its continuance has been a quiet time, Staffordshire manufacturers would have continued their round of operations only with the greatest difficulty. Had it occurred at the same time last year there would have been a very different tale to tell.

The future position with regard to clay supplies is distinctly serious for pottery manufacturers. There will be a greater demand than output for a long time to come, and competition for consignments will tend to raise the prices. The American buyers in particular do not mind the figure so long as they can get supplies, and with a shortage existing Staffordshire buyers will, indirectly if not directly, come into competition with them. The china clay market at the present time is almost in a "panicky" condition, and one merchant informed me that the position was so insecure that at the moment he would not take on a new contract. The clay owners, he said, were getting absurdly high prices, the result, of course, of the abnormal demand. I stated last month that clay prices have been hardening for some time, and that the present limited supply would tend further to enhance them. An increase of a considerable amount is now certain. During the month the statement has been made in a local newspaper that next year's contracts would show an advance of 7s. a ton. That, of

course, is an exaggerated prediction, but from inquiries I have made a very substantial increase appears to be inevitable, and next year local manufacturers will have to pay from 2s. to 3s. more for their clay. There is, therefore, yet another burden for the Staffordshire pottery producers.

The miners' non-union question still remains unsettled, and though the crisis may not have been passed, the outlook is decidedly more hopeful. As reported in last month's notes, notices to terminate contracts were tendered on behalf of the four unions acting together—the North Staffordshire Miners' Federation, the Firemen, Examiners and Shotlighters' Association, the Enginemen and Stokers' Union, and the Navvies' and General Labourers' Union. Following the giving in of notices, the position became exceedingly critical. The colliery owners had declined to interfere in any way with the labour at the collieries, whether union or non-union, and the men's leaders replied that unless the owners took the drastic step of refusing to employ non-union labour, the notices would be acted upon and all the men brought out on Saturday, Oct. 11. The parties, however, had the good sense to meet together in conference again, this meeting, which was of a prolonged and momentous character, taking place on Oct. 7. The position, so far as the owners were concerned, was made the more difficult by reason of the fact that the unions' demand embraced all workers about the collieries—miners, firemen, enginemen, stokers, and even general labourers. Had it only applied to the underground workers, they might have been able to comply with the request to exclude non-unionists from the pits, for very few indeed of the miners remained outside the societies. Most of the non-unionists consisted of other workers, and particularly general labourers.

The immediate crisis was, however, overcome by a compromise, the coalowners passing the following resolution :—"That in view of the small numbers now outside the unions (reported to be 4 per cent. of the whole), the owners having fully considered the question, wish to express their sympathy with the unions on the question of non-unionism, and will advise such of their men as are not already members to join their respective unions, subject to the suspension of the notices for four weeks, namely, until Nov. 8." Thus a respite was assured, and since that conference the unions and owners have joined hands, so to speak, in persuading the remaining non-unionists to come into the societies. The owners, on their part, have posted notices at the various collieries, advising those still outside the ranks to come into the unions. How far this joint action has been successful in rounding up the stragglers has not been allowed to transpire, but on Oct. 21 and 24 two further conferences between the colliery owners and union leaders were held. The discussions were again of a protracted character, but no definite conclusion was arrived at. The present position is that the notices expire on Nov. 8 unless withdrawn or further suspended, but in view of the co-operative attitude adopted by the employers, it seems wholly beyond reason that a general stoppage could now ensue. Doubtless the men's leaders are anxious to obtain from the colliery owners an assurance that they will employ no non-union labour. Whether the owners will give that assurance, in case the demand is presented in the form of an ultimatum, will doubtless largely depend on the number still outside the unions. However, the position is infinitely more favourable than it was a month ago, and for the unions to force a strike now would be wholly against public opinion and totally unreasonable. The leaders will doubtless realise this.

Manufacturers in the Potteries have an old-standing grievance in the matter of railway rates, and the recent increase, permitted by legislative enactment, has accentuated it. The matter was discussed at the last meeting of the North Staffordshire Chamber of Commerce. Mr. S. W. Wheatly, the Chairman of the Railway Rates Committee, said as compared with other large communities they had paid 25 to 50 per cent. more in freightages, and now those amounts were supplemented by increased charges. The advancing of the rates by scale, he contended, had had the effect of increasing some beyond the maximum, whilst in other cases rates which were company's risk rates had been converted into owner's risk rates. He further stated that whilst the increase was uniform in that district, he could not find any other district in England where the full increase had been charged. Other railway companies, finding the local rates nearly at the maximum, had not increased the local rates, but that was not the case in their district. He invited the members to look carefully into their charges, and to communicate with the secretary if they had ground for complaint. He suggested that if there were then found to be sufficient cause, the Board of Trade should be communicated with, and eventually that they should ask whether the time had not arrived for the appointment of a Royal Commission to inquire into the subject of railway rating.

In the course of the discussion two remarkable cases were quoted by Mr. G. Lester as showing the advantage which Continental trade enjoyed as against the local. For bringing stone 70 miles to the Potteries the rate had been 8s. a ton, and he believed it had now been increased to 8s. 4d. These supplies had to compete with French stone which came 700 miles for the same money. The next instance was in regard to German potters, who, he said, obtained china clay and stone from Cornwall, and had it delivered at their works 5s. a ton cheaper than the North Staffordshire manufacturers did. It was estimated that the raw material brought into the Potteries district during the twelve months was 182,000 tons, so that in that district manufacturers had to pay £40,000 a year more than the German potters did for the same quantity of raw material. He maintained that the only remedy for the existing high rates, both as regards railway and canal, would be the construction of an independent canal. A resolution on the lines suggested by Mr. Wheatly was adopted.

Reference was made at the same meeting to the report by Col. Druitt, the Board of Trade inspector, regarding the condition of the Harecastle new tunnel, a résumé of which was published in last month's issue. Mr. H. Boddington said the action of the Chamber all through the controversy had been to protect the interests of the district, and the inspector's report proved that they were justified in asking the Board of Trade to inquire into the conditions. Reference was made in the report to a length of 400 yards which required to be practically rebuilt, and in this connection it had to be remembered that the height of a tunnel was that of its lowest part. Now that the matter had been brought to the notice both of the railway company and the Board of Trade, any responsibility in the future would rest between those two bodies. The report stated that neither the old canal tunnel nor the railway tunnel showed any sign of subsidence. This was an error, for the old tunnel was practically rebuilt for a distance of 400 yards five years ago at a point corresponding to where the trouble now was in the new tunnel. The inspector further stated that although it was impossible to forecast with accuracy, he did not think there was

ground for apprehending any serious subsidence. It was with a view to preventing the consequences of any such occurrence that they had advocated a deviation canal, which would have avoided such difficulty for all time, and inaugurated a greater scheme of canal development.

The Stoke-on-Trent Education Committee have awarded their local art scholarship, which is of the annual value of £50, and tenable for three years at the Royal College of Art, South Kensington, to Joseph Hollinshead, a student of the Burslem School of Art. The results in the recent examination in pottery have been reported to the committee as follow:—Honours grade: Silver medal, Cyril Edwards; bronze medal, Harry Lawrence Steele. Ordinary grade: Silver medal, Edward Overton Jones; bronze medal, E. N. Bennett and Godfrey Hammersley. At the October meeting of the committee, a report was presented regarding the difficulty which has arisen in the staffing of the art schools. Under the new scheme the principal of the Burslem School (Mr. Stanley Thorogood) was appointed Superintendent of Art Instruction, and the other four headmasters were offered the positions of specialist teachers under Mr. Thorogood's direction. The four art masters at first demurred to taking the new appointments on the ground that they were of lower status, but the report referred to stated that the headmasters of the Tunstall, Stoke and Longton schools had accepted the new positions. The headmaster of the Hanley School, however, had not communicated his decision, and arrangements had been made for him to temporarily continue in charge of the Hanley School until the expiration of the notice given to him to terminate his engagement, or the acceptance of the post offered to him.

The death of a glost placer, Richard Grainger, aged 43, of 130, Normacot-road, Longton, was investigated by Mr. Hugh W. Adams (coroner) at Longton on Sept. 29. It was stated that the man, who died suddenly on Sept. 26, had been employed for 18 years by a Longton firm of china manufacturers. Until April, 1912, he worked as a glost placer. He was then taken from lead processes as a precautionary measure, though he had never been suspended, and was found other work by the firm. He was described as a very careful man. The medical evidence showed that the man's death was due to chronic Bright's disease, set up by his employment as a lead worker, and a verdict was returned accordingly.——An inquest held at Longton on Oct. 8 relative to the death of George Arrowsmith, aged 50, ware cleaner, of 3, Woodland-street, Anchor-road, Longton, showed that there was nothing either before or after death to suggest lead poisoning. Dr. Lefevre said he visited the man on Oct. 6 and found he was suffering from indigestion. He was called later and found the man dead. He had vomited considerably, and in his opinion some food had got fast in the windpipe. All the post-mortem findings pointed to suffocation. A verdict of "Accidental suffocation" was returned.——The death of a colour manufacturer's fireman, Lewis Perks, aged 55, of 18, Sneyd-street, Cobridge, was investigated by Mr. Hugh W. Adams on Oct. 11. Death was stated to be due to heart disease, following chronic nephritis. Dr. S. King Alcock, factory certifying surgeon for Burslem, said his first examination of the deceased was in 1907, and he was then suffering from paralysis of the hand, which was due to his employment. Witness used his discretion, and did not suspend the deceased, as he thought no good could be done by so doing. The man was marked "3 B." In November of last year (he then gave up work) he was in a similar condition to when first examined. The verdict was "Death from heart disease following chronic nephritis due to working in lead."

As stated a few months ago, the operation of the Insurance Act has been accompanied by sickness claims far in excess of expectations and the previous experience of friendly societies; in fact, malingering is alleged. The Stoke-on-Trent Insurance Committee some time ago requested the Insurance Commissioners to sanction the appointment of a medical referee to whom doubtful cases could be reported. The commissioners have now replied refusing the request, but stating there would be no objection to arrangements being made by committees at the request of and as agents for approved societies, on the clear understanding that the cost was defrayed by the societies. At their last meeting members of the Stoke-on-Trent Insurance Committee criticised this decision, contending that the only way of dealing with the question of malingering was to appoint a medical referee for the whole area. ——The marriage of Mr. Gilbert H. Harris, son of the late Mr. J. T. Harris, of Stone, and a member of the firm of Bullers, Ltd., manufacturers, Hanley, to Miss Muriel Perks, younger daughter of Mr. John Perks, of Tettenhall, Wolverhampton, took place on Sept. 30 at St. Michael's Church, Tettenhall. The bride was given away by her father and attended by four bridesmaids. The best man was Mr. R. W. G. Meakin, of Stone. The wedding presents included old oak dining room furniture from the employees of Bullers, Ltd., and a silver épergne from the employees of John Perks & Sons, Ltd., Wolverhampton.

One has got so accustomed to find fault with the Board of Trade for almost everything that happens that it is quite a relief to be able to chronicle something done by them which can only be interpreted as having been commendably inspired. We refer to the action of Sir R. Sothern Holland, H.M. Trade Commissioner for South Africa, who has been instrumental in sending down to the North Staffordshire Chamber of Commerce for the inspection of British manufacturers a collection of cheap Continental china, earthenware and glass as at present being supplied in bulk to the South African market, the object being, presumably, to stimulate the interest of British manufacturers in the type of goods in general demand in that Colony. The information was first contained in a letter received by Mr. A. P. Llewellyn, Secretary of the N.S. Chamber of Commerce, from the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C., dated Aug. 25, offering to send down the collection to Tunstall if the Chamber could make suitable arrangements for exhibiting it. The Secretary of the Chamber embraced the offer, undertaking to accommodate the samples in his own office, with the result that, at the time we write, they are available for inspection there. The writer has already gone to the trouble of seeing them, and whilst he is bound to report that they are of such an unfinished and inferior type that he thinks the North Staffordshire manufacturers will, on the whole, be inclined to "pass," the Board of Trade should, he thinks, be complimented on the steps they have taken in the matter. After the samples are finished with in the Stoke-on-Trent area they will, it is understood, be available for the inspection of any other industrial centre which may be sufficiently interested in them.



THE STOURBRIDGE, BIRMINGHAM AND NORTH OF ENGLAND GLASS TRADES.

(FROM OUR OWN CORRESPONDENT.)

DURING the past two months there has been a falling off in the production of certain classes of goods in the glass trade, shown most in the green and black bottle industry of Lancashire and Yorkshire; but it cannot be said there is depression anywhere. In Stourbridge and Wordsley the manufacture of flint glass, especially of the best qualities, has been up to the average for the season, and leading firms whose productions are of the highest class have little or no reason to complain of the state of business. The demand from London by West End dealers and merchants for cut glass, the bulk of it table ware of artistic design, has improved, and it is expected that during the month just entered upon there will be further and large orders for cut and engraved dishes, claret jugs, champagnes, and wines, &c. Cutters have been fully employed, and at the time of writing they are quite busy. In pressed wares of best and medium qualities there is a good deal doing, and they make their way against inferior and cheaper articles without much difficulty, one cause of this being the brilliance and purity of the metal. As is always the case at this time of the year there is a lessened demand for coloured flower-vases and bowls, &c., but makers have had a good run, and now the skilful workmen are engaged in the production of electroliers and other glasses for the more modern illuminant, while at the same time the wants of gasfitters are being prepared for and supplied. One well-known house in the district is putting on the market articles of their manufacture suitable for wedding presents, one of the most striking being a toilet set in richly cut glass, and including a massive wash-bowl and jug. The pattern comprises beautiful diamond work, the facets of which brilliantly reflect the light. The articles are splendid specimens of the skill of English glassmakers and cutters and of the ability of the metal-mixers, the purity and brightness of the crystal being of the best. Another striking line is in wines and other ware for the dinner-table, which are richly embellished with gold and burnished. Similar work has been done in the town and district many times, but these articles are remarkable for their beauty, the adornment of the cutting and gilding being brilliantly effective. We learn that a company established under the Limited Liability Act is engaged in building a glass manufactory on the most modern principles at Tipton. The site, between three and four acres in extent, has been well chosen for business purposes, being situated close to Dudley Port and Great Bridge railway stations, and in direct communication with the Birmingham and Liverpool Canal. Employment will be found for a large number of people; various specialities, it is stated, will be manufactured by the company, the directors of which are gentlemen of practical experience. A couple of miles away at Dudley there is a glass manufactory, but very old men can remember the time when several were in operation within the district. One enthusiast declares that sixty years ago "half the world was supplied with flint glass by the old castle town, where there were at least six large works," but that now Dudley is but "the once Mecca of glassmaking."

In Birmingham the glass trade may be described as in a healthy condition on the whole, though a great deal of foreign glass is sold in the city. Mention has been made in THE POTTERY GAZETTE in former articles by the present writer of the quantity of plain glass silversmiths and electro-platers import—small dishes, toilet bottles, and the like, which they then get cut. This branch of business appears to be extending to the injury of the local manufacturers and glassmakers. The table trade in best quality goods is fairly busy, mostly so in glass for private houses, clubs and hotels, the articles including pressed and cut dishes, epergnes, as well as ordinary table ware. There is some activity in fancy glass for the home, also in the finest makes of electric fittings in shades, globes, &c. In common goods of this latter kind there is really nothing doing; and no wonder, as cut-throat prices are accepted for foreign stuff. One noted Birmingham house whose production of novelties in glass was mentioned in a previous article, are, we hear, making in it not only electric shades, but, amongst other things, cases for clocks. These in the new material have a distinctly handsome appearance. The bottle trade of the city, except so far as concerns small articles, is not busy. Cribs, however, are doing well, and the proprietors of one established concern has removed to much larger premises in Adderley-st., and which comprise a considerable portion of the extensive manufactory formerly occupied by Everetts, Ltd., brass tube, &c., manufacturers, who have erected much larger works at Smethwick.

Mention was made recently in THE POTTERY GAZETTE of the death of that eminent glass manufacturer, Mr. H. F. Osler, of Burton Grange, near Bromsgrove, and Birmingham. His will, recently proved, shows an estate of £69,029. Besides handsome bequests to relatives and friends he left £10,000 to Birmingham University, which amount will eventually be increased from the residue of his estate after certain events have happened. Mr. Osler much appreciated the work done in the University, and, as is known, he took great interest in science, and in fact was an adept in some departments. He was highly esteemed by a large circle in all grades of society.

The glass trades of Lancashire show an alteration in some branches. The manufacture of bottles, for instance, exhibits a decline, though not by any means a serious one. There are less men employed owing, it is held, to the withholding of contracts for the present. Export bottlers at Liverpool are not as busy as they usually are at this season, and that may account for a little slackness at St. Helens, for the firms there do a great trade through them on oversea account. A little short time was worked in the bottle houses of the town, but now business shows signs of revival. In the manufacture of plate and sheet glass, for which St. Helens is distinguished above all other places in the Empire, there are no signs of dulness. The motor industry, to say nothing of the window-smashing proclivities of the militant suffragettes, has given a spur to one branch, and other branches are feeling the benefit. Sheet glass flatteners are busy, and prospects for the remainder of the year are exceedingly good. The manufacture of wired glass is increasing as it has been found by architects and builders that it has excellent properties in the way of fire-resisting, and, it may be added, burglar resisting also. It was reported lately that some tests carried out recently showed that wired glass panes were capable of withstanding great heat with very trifling injury. For factories, and other buildings of like character, it is claimed to be a great protection. Another speciality brought out at St. Helens is prismatic glass, for the better lighting of gloomy rooms, workshops and warehouses. To suit the necessities of buyers the prismatic glass is made in three different angles, and is, therefore, more serviceable.

The glass trade of Warrington is in a healthy state, though there is no great push. The town, some 60 to a 100 years ago, had a great reputation as a seat of manufacture of flint goods, and a discovery made about a fortnight ago affords a slight proof that this was the case. Spanning the river Mersey on the border of the

town, is a bridge giving access to Cheshire and the southern counties generally. It was erected in 1836, and is a substantial structure, but as vehicular and other traffic has greatly increased it is now being demolished to make room for a much more commodious bridge. When the keystone of the central arch was taken out it was handed over to the Mayor and Corporation, and they found, within a sealed cavity, a glass casket, the production of one of the Warrington glass works, and on being opened the gentlemen discovered one of each of the gold, silver, and copper coins of the realm, and these, with other relics, were handed to Alderman Bennett for the public museum. This incident brings to the mind of the present writer another incident where glass shone, shall we say, in another stone-laying event. Upwards of half a century ago Warrington Parish Church was rebuilt, and a firm of no small celebrity in the flint glass trade, that of Alderson, Perrin & Co., undertook to make a crystal casket for the reception of coins and papers, &c., to be placed in the foundation stone. When produced to the public at the stone-laying ceremony it excited universal admiration, so beautiful was it as a specimen of the glass cutters' art. In it were deposited one of each of all the coins—gold, silver, and copper—silver medals, and valuable documents, and placed in a suitable cavity in the foundation stone. There was a religious ceremony. Next morning it was discovered that thieves had removed the stone. The glass casket was smashed to pieces, and lay on the ground with "the valuable documents," but of the coins not even a farthing could be found!

Leaving Warrington for Manchester, we have to report that flint glass manufacturers are doing fairly well. The trade is about holding its own, but they are not packed with orders. Travellers report that labour unrest causes dealers to act very cautiously, and the purchases made are mostly of a hand-to-mouth character. One firm in the city are building a fresh furnace, and extra warehouses, mainly for machinery, also for protectors for water-gauge tubes on steam boilers. In the bottle trade, though it is a little quieter just now, there is a confident feeling that business will soon be active. The firm whose men struck against the use of machines—a strike that failed—are putting down more machines in readiness for a new tank that is nearing completion. In machinery glass there is less doing, owing to unrest among certain of the cotton operatives of Lancashire. In tubing, while the home demand is slack there is no falling off in export orders, chiefly from the colonies. The Manchester cribs continue to be actively employed in the production of inks, sauces, and other small bottles.

In South and W. Yorkshire, where the bulk of the bottles made in Engl. are manufactured, there has been a slight falling off in the demand since the publication of our last article two months ago, and it will occasion no surprise if dulness here and there prevails during the whole of November, the season being over. The weather has generally been fine this autumn, but the demand for mineral water bottles has hardly kept up to the expected demand; and that has been the case throughout the summer. On the other hand, ale and stout bottles have gone off well, the call being from exporters as well as home bottlers. Some houses have reduced the number of hands, but only to a small percentage. In medical goods there has been a fair run at Rotherham, also at Hunslet; and the present call, largely in flint, is about the average for the time of the year. At Stairfoot, and in Barnsley itself, there is a moderate business doing, partly in bottles and jars made by machines, which are something like linotypes in the printing trade—now approaching perfection in design and construction. The glass trade at Knottingley is only moderate. Here, as at other places, it had been expected earlier in the year that there would be a great demand for bottles and jars for ripe fruit and jam, but the season has proved a disappointing one, the yields in the orchards of plums and other fruit for preserving being much smaller than usual. This, of course, has had an effect on the glass manufacture as carried on in the district under mention. Castleford, Wakefield, and Thornhill Lees firms have had much the experiences of their competitors, but there is a confident belief that things will mend, and a brisk business is expected in December.

The manufacture of flint glass goes steadily forward in the city of York, table ware being the chief requirements of the public. Cutters are working the usual hours, and are expecting to be much busier before the present month comes to an end. Steam and other tubing is in moderate demand, so are flint medical bottles. In heavier green goods for aerated water manufacturers there is rather less doing. Going southward we may mention, what doubtless many readers know full well, that in Bradford several incendiary fires have taken place recently, and many thousand pounds' worth of valuable goods and several buildings destroyed. What is believed to have been another attempt—there were two in fact—in Manchester-road, outside the shop of Mr. Henry Jackson, glass and china dealer, a packing case filled with straw was set on fire by some unknown person at night, and a similar occurrence took place at Clough Mills. Luckily there was early discovery in each case, and the flames were quickly extinguished.

On the Tyne and the Wear there is a rather better feeling than when last we wrote, attributable partly to the demand prevailing for pressed tumblers, sugars, dishes, &c., and which is expected to last for a few weeks. Flint glass cutters have not full employment on best goods, and round the furnaces blowers and chairmen are less busy. The Tyne Flint Glass Works have come to an end, the machinery and plant, as well as goods in the warehouses, having been dispersed after an auction sale by Vasey & Reed, of South Shields. The bottle trade of the district is not very active just now, but there is briskness at Seaham Harbour, which it is hoped will last some time, and rather more is doing at Sunderland. Prospects for the winter are regarded as encouraging.

THE CORNISH CHINA CLAY INDUSTRY.

(FROM OUR OWN CORRESPONDENT.)

As we anticipated last month, the long strike which had at one time seriously menaced the important Mid-Cornwall china clay trade has ended. It can be confidently stated that general relief was expressed by all sections of the community on Sunday evening, Oct. 5, when the news spread that at a conference held during the day the strike had been officially terminated. For eleven weeks this struggle had dragged on, each side being sanguine of ultimate success, sometimes depressed by a reverse, and sometimes buoyed up by a tactical advantage; but, through it all, grim in determination not to give in. There can be no doubt that the historic events at Bugle on Sept. 1 marked the turning-point in the strike. The bâton charge destroyed all hope of the strikers being able forcibly to prevent men returning to their work if they desired to do so, and consequently the strike began to collapse.

The persistent attempts at peaceful picketing became an utter failure, and the strikers' efforts to put every conceivable obstacle in the way of despatching clay by land and sea, which were interesting from an imaginary point of view, failed to elicit outside sympathy. Whilst all this was going on, the employers were rapidly opening

up their works, and then came the decision of the masters to carry their battle into the enemy's camp, the reputed stronghold of Trade Unionism. On Sept. 22 the works in the St. Stephen's district were very successfully re-started, when more men than was necessary were returning. Every day men were seceding from the ranks of the strikers, so that by the following Saturday, Sept. 27, about 2,500 men had returned to their work. A conference was held in the Public Rooms during this Saturday, but, despite the return of a large majority of the men, the leaders would not admit their approaching defeat, and a resolution to continue the battle was unanimously endorsed. By another week over 3,000 men were back, and to add to the hopelessness of continuing the struggle the employers declared their intention of opening all the works in the district on the following Tuesday. It was also intimated that those men who did not apply for their places before the subsequent Monday would find their services not required. Even at this eleventh hour the leaders were optimistic, and in their nightly addresses to the men declared they were winning, and no clay would be shipped if the works were all opened up. There was very little life left in the men's movements by the end of the week, and the result of the conference held on Sunday, Oct. 5, was foreseen. Although the leaders had shown such optimism, the critical nature of their position must have been realised. On Saturday, Oct. 4, the officials and the Rev. H. Booth Coventry held an important consultation, and it was gleaned that a decision had been arrived at regarding the strike. The conference in the Public Rooms on the next day (Sunday) was crowded, lasting from five o'clock to eight in the evening. All the organisers were present, excepting, of course, the Rev. H. Booth Coventry, who was engaged in his ministerial capacity. Mr. Coventry, however, sent a letter, in which he said :—

"I cannot advise any man to remain out. To prolong the strike would, in my judgment, simply result in increased suffering, and serve no beneficial purpose. In the interest of the men and of the future of Trade Unionism in the district, I think it wise to terminate the conflict. The matter is too serious for us to rely upon vain hopes and enthusiastic imaginings. Courage is needed sometimes to acknowledge defeat. There will be need for the greatest manliness afterwards in carrying out the work. We must not end with the end of the strike. Freedom must be won in the clay pits ; a living wage must be gained for every man. Labour must come to its own and enjoy its right. I feel to continue the strike will be to lose the fight. It will weaken our forces, deplete our ranks, exhaust our funds, and, so far as I can judge, simply result in ultimate collapse."

The organisers were all present, and in their addresses to the men they laid before them the foregoing letter and the recommendations of the Strike Committee, which were to the effect that the men should return to work, and this decision was unanimously approved.

The chief organiser, Mr. Matt Giles, admitted after the meeting that the strike had gained nothing for the men except that it had increased the membership of the Workers' Union, and considerable educational work had been done. He would also admit that it was a reverse, but later on they would make a further attempt to improve the conditions of the men. They intended remaining in the district to assist Mr. Vincent in a thorough organisation of the branches of the union in the Mid-Cornwall area.

It must be admitted that no one was happy during the strike. It disturbed many a cherished aspiration and also strained many friendships, apart from the misery and financial loss it has caused in all directions. There was quite a changed atmosphere on the Monday following the final meeting, which seemed to have prevailed throughout the district. All the engines and machinery resumed their wonted activity, the dries emitted their usual volume of smoke, whilst the horses, wagons, and wagoners brought back the old life to the thoroughfares, and everything seemed to have taken on a welcome hue. Through the narrow streets of St. Austell some of the wagons ladened with clay were adorned with improvised flags, and as they were driven merrily through the town it seemed like an old friend becoming reconciled after a long estrangement. Since the final decision we believe that all sections are working for the pacification of the neighbourhood. There were several cases of disorder during the strike which occupied the St. Austell bench of magistrates immediately after the general resumption, and the attitude of leniency, which marked the deliberations and findings, found general endorsement by the public as likely to contribute in a large measure to a peaceful settling down.

A very serious charge was preferred against Howard Vincent, a young man, of St. Mewan, who had been previously remanded for wounding P.C. William Collett, of the Cornwall County Police, by shooting him with a revolver on the evening of Sept. 22. P.C. Collett, who had been unable to attend the previous courts, was obliged to use a crutch, and was accommodated with a chair, said he was on duty at the Halriggan Clay Works on the night in question, and at about 8 o'clock in the evening he heard a crowd of men coming up the hill shouting and bawling. When they reached the office the strikers again shouted out about their rights. P.C. Collett went out, and asked them what they were making so much noise for, when some one fired. Witness observed a man turning around towards him, and caught hold of his macintosh, which was subsequently identified, and led to Vincent's arrest. After a lengthy hearing, the accused was released on bail until Oct. 27, when he was sent to prison for three months in the second division.

It is understood that as a result of the strike many of the largest firms intend directing their attention to labour saving appliances, and even now some works have adopted hydraulic hoses for mechanically washing out the clay from the slopes.

We understand the jetties at Fowey are now in full swing again, and the large steamers are calling for huge consignments.

Since the official termination of the mid-Cornwall china clay workers' strike, it appears that there are several men who have not been taken back to their works, and it is alleged that they have been victimised. Consequently Mr. Matt Giles, the chief organiser of the workers' union, has been hastily summoned to the district to inquire into them, and as a result the following official communication was made to the Press :—

In view of very definite statements that have been made to the effect that the employers deny that any victimisation is taking place, a special meeting of the Central Strike Committee was called to inquire into the causes of 50 men being refused work. As a result the Strike Committee are of the opinion that while two of the leading companies, the West of England and Great Beam China Clay Co., and John Lovering & Co., have not victimised any men, it appears from evidence presented that 50 men who were employed in the following works are being victimised by being refused work, viz. : Bis-covillack, Carne Stents, Ruddle, Pentruff, West Carclaze, Hallaze, Carbis, Ruddle Downs, West Goonbarrow, Blackpool, Prideaux, Trethurgy, Lower Halviggan, and South and West Gunheath.

I am of opinion, said Mr. Matt Giles, that it is the desire of the Masters' Federation that no victimization should take place, and I am hoping when their attention is drawn

to these facts the masters will put matters right. All the men who have been refused work were union men, and most of them were known to have taken a prominent part in the strike.

On Oct. 23 the decapitated body of Mr. Thomas Nicholls, of Tremena, St. Austell, a prominent china clay merchant, was found on the railway near Bodmin-road. Mr. Nicholls, who was 76 years of age, had been in failing health for a considerable time, and for several months was unable to get any sleep. He had been under medical supervision, and had been away practically the whole summer, but had not received much benefit. During the past fortnight he had been staying with his brother-in-law, Mr. Bate, at Penpoll Farm, Cardynham, near Bodmin, and on the date mentioned, after taking breakfast with his wife and daughter, said he was going for a walk, as was his usual custom. In the afternoon, as Mr. Nicholls did not return, his brother-in-law went in search of him, and later in the afternoon was informed that he had been killed on the line. At the subsequent inquest the Coroner stated that Mr. Nicholls had been treated for serious nervous condition and sleeplessness, and the jury returned a verdict that Mr. Nicholls met his death by being run over by a train, in front of which he had placed himself whilst temporarily insane. As a lad the deceased gentleman was a well-known agriculturist, but he gradually became interested in various china clay concerns. He was chairman of the North Goonbarrow and Old Beam China Clay Co. and an extensive shareholder in the Great Treviscoe, Bloomdale, Lower Lansalson, Single Rose, and North Cornwall China Clay Companies ; and also in several mining properties in West Cornwall. He was regarded in the highest esteem by all classes, and sympathy of the whole district will be extended to the bereaved family in their tragic loss. The remains of Mr. Nicholls were interred in the St. Austell Cemetery on Oct. 27, and the very large gathering bore ample testimony to the great esteem in which he was held. Among the bereaved family were the widow, Mr. Hart Nicholls, sen. (brother), Mr. R. Bate (brother-in-law), Mr. H. Nicholls, jun., Mr. W. W. R. Nicholls, Mr. T. Nicholls (nephews). Amongst the large assemblage were Dr. R. F. Stephens, representing the Lower Lansalson and the Single Rose China Clay Cos., Mr. J. M. Williams (secretary), and Captain T. Rowse; Mr. M. Richards, the Rock Hill China Clay Co. ; Mr. T. Martin, East Goonbarrow China Clay Co. ; Captain H. Thomas, North Goonbarrow China Clay Co. ; Captains S. Dyer, S. J. Dyer, L. H. Dyer, and Wilson Dyer, the Great Treviscoe China Clay Co. ; Captain J. Goldsworthy, Goonvean China Clay Co. ; Captain W. Trudgeon, Bloomdale China Clay Co. ; Captain T. Hore, Carbis, Captain W. Higman, Mr. James Perry, Burthy China Clay Co. ; Mr. H. S. Hancock, the Caudledown China Clay Co. or Thriscutt & Bale ; Mr. W. Rose, North & Rose ; Mr. W. H. Richards, the Mid Cornwall China Clay Co. ; Mr. H. Phillipps, West Carclaze Clay Co. ; Mr. Edgar Williams (secretary), North Goonbarrow. There was a magnificent display of floral tributes, including wreaths from many of the companies with which the deceased was associated.



THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

THERE has been very little change in these trades in Scotland since last date of writing. Families are all now back in their ordinary residential quarters, and the retail houses of the cities and towns have been doing better than at any time during the past three or four months. The retailers in the summer resorts are therefore in just the opposite case, having now very little to do—while it is a long time to look forward to the next season for customers of the visiting class. As already noted in a foregoing report, the holiday season for the present year turned out to be not so bad after all, although it made a very poor beginning, owing to the tardiness of the incoming of actual summer conditions. This year's summer came in very late, and it would appear as if the winter of 1913-14 were inclined to do just the opposite, by coming in very early. Already we have had snow in Scotland, some of the hills having been first tipped with it just about the middle of the month, while cold of considerable strength has been felt all over the country. This, however, has not affected the china, earthenware, and glass trades anywhere, for, although cold snaps began so early, there has been rain only in a very moderate degree, and shopping conditions have, on the whole, been reasonably good.

The wholesale merchants in the pottery and glass trades have been working the country generally with their travellers, and reports have been coming in as usual. As regards the encouragement met with by these travellers, there seems to be considerable diversity ; for at certain places round the coast-line and in the agricultural inland districts, the orders booked have been of fair bulk, while at other points the reception met with has been distinctly disappointing. The fact is that the china, earthenware, and glass industries, in the outlying quarters, depend largely at this season of the year on how the cereal crops and the fishing have turned out. Well, this year the fortune of the country has been very varied as regards the outcome of the cereal crops and the fishing. In some parts the harvest turned out quite badly, while in others there were fairly average results. Similar conditions have marked the fishing industry (herring, haddock, cod, &c.) around the coasts of Scotland and throughout the islands. At some of the more unlucky points the fishing turned out almost a total failure, while at some other specially favoured points, the reckoning at the close of the season proved to be almost all that could be desired. Hence the varied fortune now being met with by travellers in the pottery and glass trades in Scotland.

In the department of sanitary ware manufacture there has been a very fair activity, and reports from the makers of this class of goods are more encouraging than they have been for a considerable time past. It depends largely on the condition of the building trade, and that condition has long been very indifferent throughout Scotland. But at last there seems discernible some sign of improvement here, and pottery ware of the sanitary order is feeling it, even as the other building trade departments are. Positively new building, on virgin sites, is still but little in evidence ; but there has been a large amount of work in the conversion and extension of existing buildings, and also a good deal of rebuilding wholly going on. In the finishing off of operations of the kind, sanitary ware goods have been freely in demand, and much of the up-to-date makes in bath-room fittings, &c., has been called for.

During the past few weeks Glasgow has been the scene

of several departmental exhibitions, in which pottery and glass ware productions have participated. A building trades exhibition ran for a brief space in the "Zoo" grounds, New City-road, and some makers of sanitary ware had stands there. These showed some fine pottery productions in bath room and other sanitary fittings, and appreciative attention was drawn thereto on the part of visitors, many of whom were of the rank of experts in building, and in the various fittings for buildings. Another exhibition (now going on) deals with electrical appliances. This is being held also in the "Zoo" Grounds, and it bears upon our departments of industry in that many of the fittings are of glass and crystal, also of white ware. These are mostly of excellent quality, and well worthy of being examined.

The Gazette.

Dissolutions of Partnership.

NOTE.—*When two dates are given in the following announcement the first is the date of the dissolution. The date in parentheses is that of the official advertisement.*

SPEEDWELL ENGINEERING Co. (Frederick Riley and Frederick Fuller), Speedwell Works, Tunstall, Stoke-on-Trent, engineers. Sept. 22. All debts due to and owing by the said late firm will be received and paid by the said Frederick Fuller. (Sept. 30.)

WOOD WILLIAM C. & SONS (trustees of the deceased Alexander Wood and James Wood), Govan, fire brick manufacturers. The business will now be carried on by the said trustees under the said firm name. (Oct. 17.)

WRIGHT E. & Co. (Edwin Charles Wright and Edward Smith), Buccleugh Works, Normacot-rd., Longton, china and earthenware manufacturers and decorators. Sept. 20. All debts due to and owing by the said late firm will be received and paid by the said Edwin Charles Wright. (Sept. 23.)

Orders made on Applications for Discharge.

RATHBONE SAMPSON, late the Abbey Pottery, Milton, now residing at 44, Davenport-st., Tunstall, earthenware manufacturer, late trading with, &c., as, &c. Sept. 17. Suspended for two years.

WARDLE FREDERICK CHARLES, 12, Arundel-rd., Oswestry, lately carrying on business at Stoke-upon-Trent as a debt collector under the style of the Potteries Accountancy Co., and also as a china manufacturer at Longton, in co-partnership with, &c., as &c., debt collector and china manufacturer. Sept. 17. Discharge granted subject to bankrupt consenting to judgment for £120, and £1 10s. costs, which has been satisfied.

Notice of Release of Trustee.

WOODFIELD EDWARD, The Pottery, Harborough-rd., Kibworth Beauchamp, flower and chimney pot manufacturer. Tr., Evan Barlow, 1, Berridge-st., Leicester, O.R.

Notices of Intended Dividends.

CUNDIFF JAMES FREDERICK, 20, Haddon-st., Gorton, Manchester, JOSEPH CUNDIFF, 80, Manchester-rd., Hyde, near Manchester, and THOMAS EDWARD CUNDIFF, 136, Market-st., Hyde, near Manchester, trading as F. Cundiff & Sons, 186, London-rd., Manchester, leaded light makers and glass embossers. Claims to John Grant Gibson, Byrom-st., Manchester, O.R.

DICKINS JOSEPH GEORGE, 27, Winchester-rd., Highams-park, and 108, Hoe-st., Walthamstow, late 373, High-rd., Leyton, china and glass dealer. Claims to E. L. Hough, Bankruptcy-buildings, Carey-st., W.C., O.R.

WARDLE FREDERICK CHARLES, 12, Arundel-rd., late carrying on business at Stoke-on-Trent, as a debt collector, under the style of the Potteries Accountancy Co., and also as a china manufacturer, at Longton, in co-partnership with, &c., as &c., debt collector and china manufacturer. Claims to Llewelyn Hugh-Jones, Crypt-chambers, Chester, O.R.

Notice under Assignment, &c.

PEARSON MARGARET, 17, King-st., Penrith, china dealer, &c. Claims to James Harding, Musgrave Hall, Penrith.

Extracts from the Registry of Deeds of Arrangement.

The following Deeds of Arrangement with creditors have been filed at the Bills of Sale Office under the provisions of the Deeds of Arrangement Act, 1887. *Under this Act it is necessary that private arrangements other than those executed in pursuance of the Bankruptcy Act shall be registered within seven clear days after the first execution by the debtor or any creditor.*

* *These figures are taken from the Affidavit filed with the Registered Deed, but may be subject to variation on realisation. In some cases the estimated assets are not stated.*

(*The following lists are taken from the Official Gazette information, and we are not responsible for the mis-spelling of the names of any of the creditors.*—EDS. P.G.)

BARNABY EDWIN WRIGHT, Fairholme, Parbold, and GEORGE HARTLEY HOUGHTON, Green-bank, Appley Bridge, trading at Appley Bridge, near Wigan, as Appley Bridge Brick & Tile Co., brick manufacturers. Assignment of partnership estate upon trust, &c., for benefit of partnership creditors. Dated Oct. 10. Filed Oct. 16. Liabilities unsecured, £660. Property, after deducting secured claims, £1,732. Tr., H. S. Jones, 3, York-st., Manchester. The following are creditors:—National Gas Engine Co., Ltd., Ashton-under-Lyne, £13; Cresswells, Ltd., Bradford, £3; British Petroleum Co., Ltd., Eccles, £5; G. Moxom & Sons, Huddersfield, £10; W. Park & Co., Ince, £9; R. S. Clare & Co., Ltd., Liverpool, £3; Leeds & Liverpool Canal Co., Liverpool, £21; Pearson & Knowles Coal & Iron Co., Liverpool, £3; Rosebridge & Douglas Bank Colliery, Liverpool, £39; W. D. Scholefield, Liverpool, £3; R. C. Haworth & Co., Manchester, £13; R. L. Kerr, Manchester, £5; Kimberley Oil Co., Manchester, £3; Webb & Hall, Manchester, £10; Webb & Hall, Manchester, £251; Ormskirk Gas Light & Coke Co., Ormskirk, £6; Bispham Hall Colliery Co., Orrell, £5; T. Sharrock & Sons, Pemberton, £3; Old Silkstone Coal Co., Sale, £9; R. Wright, Ltd., Southport, £66; Gwyn, Jefferies & Lace, Ltd., Swansea, £14; Diamond Lubricating Co., Ltd., Weaste, £4; R. Bolton & Son, Wigan, £5; Douglas Forge, Ltd., Wigan, £11; Lancashire & Yorkshire Railway Co., Wigan, £57; J. Lambe & Co., Wigan, £5; M. A. Peters & Co., Wigan, £11; I. Peake & Co., Wigan, £13; Worsley Main Collieries, Ltd., Wigan, £25; Manchester Ship Canal Co., Worsley, £4.

LEWIS HYMAN, 9, West Bar, Sheffield, glass and china merchant. Dated Oct. 8. Filed Oct. 14. Liabilities unsecured, £1,496. Property, after deducting secured claims, £156. Tr., Donald Craig, York-st., Sheffield. The following are creditors:—De Grelle, Houdret & Co., London, £33; R. Johnston & Co., London, £7; Meister & Jaffe, London, £61; C. J. Dams & Co., London, £21; S. Dorverger & Co., London, £21; L. & E. Rosenfield, London, £14; Lazarus & Rosenfield, London, £53; S. Simons, London, £29; E. Enderlein, London, £66; Weiss & Biheller, London, £9; F. Krasa & Co., London, £3; A. Schatz, London, £86; W. J. Bush & Co., London, £4; Loose & Co., Ltd., London, £20; Gustave Ceasar, Allemagne, Abeddein, Germany, £11; Globe Electro Plate Co., Birmingham, £29; S. Parkes & Sons, Birmingham, £23; Fitter, Forbes & Co., Birmingham, £16; Silvania Plate Co., Ltd., Birmingham, £6; Cadbury Bros., Bournville, £26; S. Cook, Brierley Hill, £6; Bond & Co., Bristol, £5; J. Sadler, Burslem, £7; Bretby Brick & Stoneware Co.,

Burton-on-Trent, £5; Caesens et Roseda, Courtrai, £3; J. Kent, Fenton, £13; A. G. Harley Jones, Fenton, £70; J. Gray & Co., Glasgow, £9; J. H. Weatherby & Son, Hanley, £30; S. Bennett, Hull, £40; Rogall & Simon, Leeds, £10; Fludc, Ltd., Leicester, £68; Bland & Co., Liversidge, £8; Bradbury Bros., Longton, £34; J. H. Cope & Co., Longton, £32; T. Poole, Longton, £8; St. Louis Fine Art Pottery Co., Longton, £28; Royal Art Pottery Co., Longton, £3; Cartwright & Edwards, Ltd., Longton, £11; C. Forester & Sons, Ltd., Longton, £17; Bernstein Bros., Manchester, £51; G. Newton, Manchester, £7; C. Broomhall, Manchester, £8; C. S. Gilbert, Manchester, £25; L. S. Knight & Co., Manchester, £4; W. Sutcliffe, Ltd., Manchester, £13; Liddle, Henzell & Co., Newcastle-on-Tyne, £6; France & Sons, Newcastle-on-Tyne, £37; Hepworth & Heald, Rotherham, £8; Dr. J. A. Hutton, Scarborough, £4; A. H. Hartman, Sheffield, £53; F. Wood, Sheffield, £6; J. Isaacs & Co., Sheffield, £31; Expert Advertising Co., Sheffield, £13; J. Hall & Sons, Sheffield, £10; Empire Porcelain Co., Stoke-on-Trent, £10; British Porcelain Co., Stoke-on-Trent, £6; M. Turnbull, Sunderland, £10; T. Rathbone & Co., Tunstall, £6; W. Adams & Co., Tunstall, £16; Boisseliers, Watford, £17; Rowntree & Co., Ltd., York, £69; Dr. G. H. Scott, £39; L. Isaac & Sons, £3; J. Harris, £20; banker's claim, £20.

Private Meetings.

These Lists in some instances refer to Meetings of Creditors called by or on behalf of the Debtor, with a view of laying his affairs before his Creditors, or refer to Statements of Debtors' Affairs, and do not in all cases refer to failures.

Eastern Glass Co. (James Johnston, sole partner), 184, Dalmarnock-rd., Glasgow. A meeting of creditors was held on Oct. 14, when the following statement was submitted. A committee was appointed to inquire further into matters, and the meeting was adjourned for a week. Statement of Affairs:—Liabilities: Trade creditors, £314 8s. 4d. Assets: Amount of stock-in-trade, fittings, &c., in shop, as valued £73 17s. 8d., deduct 33⅓ per cent. for enforced sale £24 12s. 6d., £49 5s. 2d.; book debts due to firm, considered good, £6 12s. 1d., total £55 17s. 3d. Deduct preferable claims: Rent—Balance due at Lammas £2 17s. 6d., three quarters due Whitsun, 1914, £14 12s. 6d., £17 10s.; taxes—gas, poor rates, &c., say £5, £22 10s.; total, £33 7s. 3d. Deficiency, £281 1s. 1d., showing an apparent dividend of 2s. 1½d. per £, subject to the expenses of realisation, &c.

Lewis Hyman, 9, West Bar, Sheffield, china and glass dealer. The creditors interested herein were called together on Oct. 20, when an approximate statement of affairs was prescnted which showed ranking liabilities of £1,501 17s. 7d. There were unsecured creditors for £1,476 11s. 10d., and partly secured creditors for £60 9s. 9d. The latter held securities of the estimated value of £35 4s., and the balance of £25 5s. 9d. was included with the ranking liabilities. The assets were estimated to realise £264 16s. 5d., and a deficiency was thus disclosed of £1,237 1s. 2d. The assets were as follows:—Cash in hand, £14 6s. 9d., stock in trade at West Bar and Sheffield Market, at cost price, £237 10s. 8d., and book debts £12 19s. It was reported that the debtor commenced business for himself about 18 years ago at Sheffield and Scarborough, dealing in drapery and hosiery goods. At the outset he had little or no capital, and sold goods from a stall on the sands at Scarborough. In 1899 he took a draper's and hosier's business at Gibraltar-st., Sheffield, where he remained for four years. Then he gave up the shop, but subsequently carried on business at the Sheffield Markets, and also at Scarborough. At the latter place he continued the hosiery business during the summer season of 1912, but in November of that year he took his present premises at West Bar, Sheffield, where he had traded as a glass and china dealer. Last June the debtor opened premises at Fargate, Sheffield, as an auctioneer, where he stayed for 14 weeks, and sustained a loss of £450. Since November, 1912, it was estimated that the debtor had carried on business at West Bar at a loss of £267. On behalf of the debtor, an offer was made of a composition of 5s. in the £, payable as to 2s. 6d. in three months and the balance at six months, fully guaranteed. That offer, it was decided, should be accepted.

Bankruptcy Proceedings.

Hemmings William Henry, wholesale china and earthenware merchant, Drayton-st., Wolverhampton, Stafford, and the Market Hall, Brierley Hill, Stafford. The adjourned public examination of this debtor took place at the County Court, Wolverhampton, on Oct. 8, when the Official Receiver stated that as far as he was concerned, the examination had been taken as far as possible, but the trustee had to make further inquiries, and he asked for an adjournment of the matter. This application was granted, the case standing further adjourned.

Roberts Evan, china dealer, &c., Grogan, Harlech, Merioneth. This debtor filed his own petition, and, according to the accounts prepared, the liabilities amount to £94 2s. 11d., the assets are estimated to realise £12 13s., and there are preferential claims amounting to 15s. It appears that the debtor worked for his father at Clogwyn, Harlech, up to three years ago, at which time he started trading at Grogan, Harlech, on his own account. He had practically no working capital, and obtained his goods on credit. He states that the cart and horse he used belonged to his father, for which he paid 9s. a week. Debtor has suffered loss from fruit and fish perishing, and by the illness of his first wife. At the date of the receiving order there was only a little china stock and some furniture admitted to belong to the debtor. The wife claimed other furniture, and some was obtained on the hire purchase system, on which only a small sum has been paid. It is doubtful whether the policies have any surrender value. The debtor has not kept proper books of account. The failure is due to illness in family, small profits and losses, and debtor admits knowledge of his financial position since the end of the season of 1912.

Receiving Order Rescinded and Adjudication annulled.

Godwin Austin Francis, Good Reste, Lugwardine, trading with, &c., as &c., at Lugwardine Works, Withington, encaustic tile manufacturer. Oct. 14.

Administration Order in case of Deceased Debtor.

Handley Joshua (Deceased), late 19, Sidney-st., Sheffield, late master glass cutter. The following are creditors:—Hy. Fletcher & Son, Sheffield, £57; Harris Blumberg, Sheffield, £90; Gilbert Hall, Sheffield, £60; Herbert Joshua Handley, Sheffield, £90; Bernard Handley, Sheffield, £35; James Maclaurin, Sheffield, £15; John Housley, Sheffield, £28.

New British Patents.

The following list has been compiled expressly for "The Pottery Gazette" by G. F. Redfern & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

Apparatus for Clay Mining, No. 20,459.—S. H. Leech and Standardised China Clay Co., Ltd. Method of and apparatus for clay getting or mining. Sept. 10, 1913.

Artificial Tiles, No. 21,579.—J. M. Macdonald and J. J. Keswick. Manufacture of artificial slates or tiles. Sept. 24, 1913.

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2 GRANDS PRIX—PARIS, 1900. | 2 GRANDS PRIX—ST. LOUIS, 1904.
FRANCO-BRITISH EXHIBITION, LONDON, 1908.—MEMBERS OF JURY (HORS CONCOURS)

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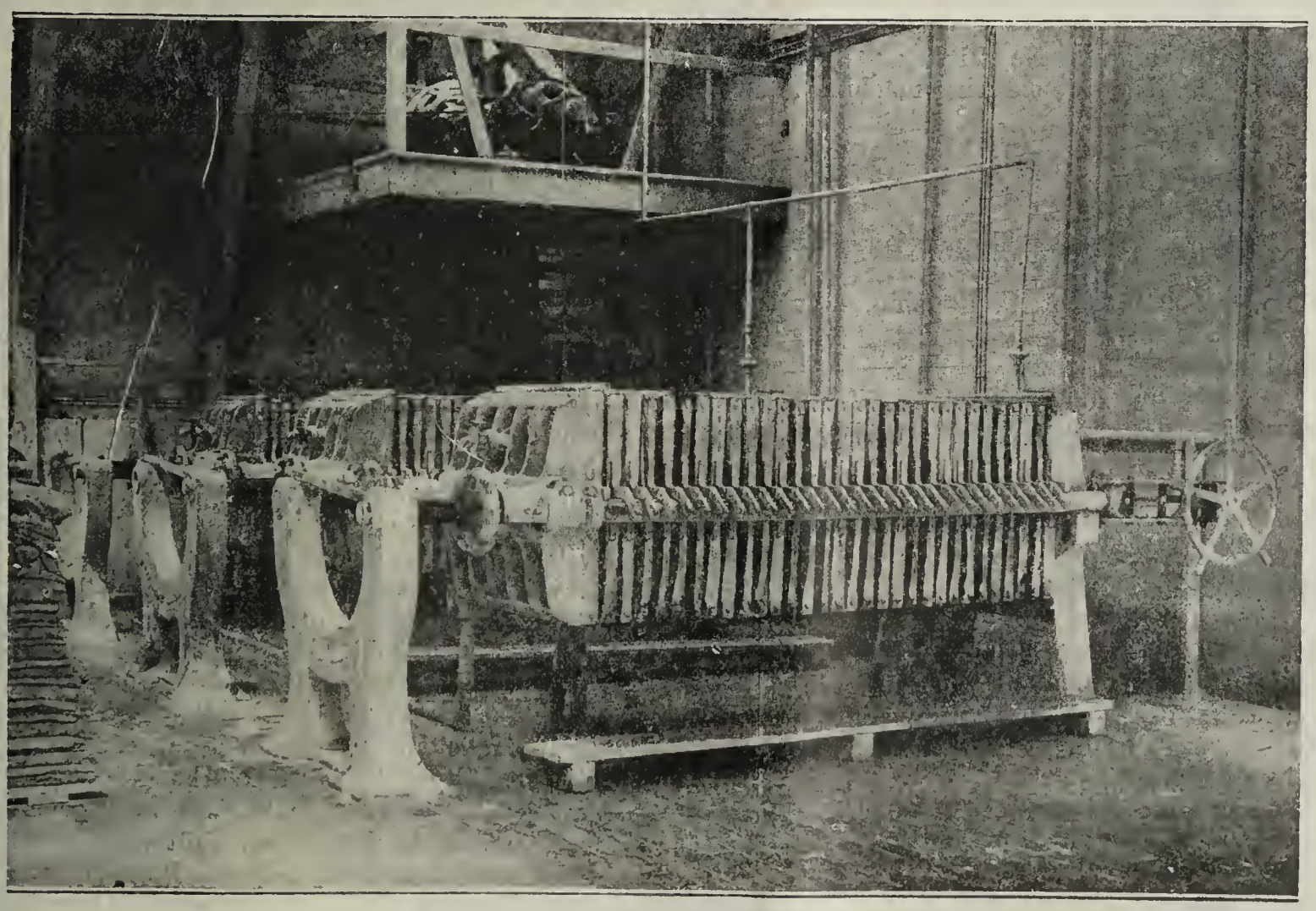
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BRICK KILNS, No. 21,289.—W. Drayton. Brick kilns. Sept. 29, 1913.

DOBBY, OR CARRIER, No. 21,085.—S. J. Hawthorn and J. Bentley. Dobby, or carrier, for supporting ware when being dried in the clay state. Sept. 18, 1913.

DRAIN PIPES, No. 20,440.—G. Dick. Drain pipes and the like. Sept. 10, 1913.

EARTHENWARE, No. 20,713.—W. Cottrell. Earthenware. Sept. 13, 1913.

FIXING TILES UPON FENDERS, &c., No. 22,562.—J. Barnes. Means for fixing or mounting tiles or the like upon fenders, hearths, and other parts. Oct. 7, 1913.

HOLLOW TERRA-COTTA BLOCKS, No. 21,878.—J. Critchlow. Hollow terra-cotta blocks for building purposes. Sept. 29, 1913.

KILNS, OVENS, &c., No. 20,206.—W. J. Lloyd. Kilns, ovens and the like, and particularly such as are used in the firing of all kinds of pottery. Sept. 8, 1913.

MANUFACTURE OF PORCELAIN, &c., No. 22,236.—J. S. Remington. Manufacture of porcelain, china, earthenware, and the like. Oct. 2, 1913.

MANUFACTURE OF TILES, &c., No. 22,423.—E. R. Sutcliffe. Manufacture of tiles, roof sheets, and the like. October 4, 1913.

MECHANICAL PRODUCTION OF GLASSWARE, No. 20,299.—A. Wilzin. Installation for the mechanical production of glassware. (Con. date, Sept. 18, 1912, France.) September 8, 1913.

MIXING, &c., AND AGEING CLAYS, &c., No. 21,068.—W. W. Hewitt. Mixing, agitating, blending, standardising, and ageing clays, slips, slurries, pulps, sewage, manures, liquors, and the like. Sept. 18, 1913.

PAVEMENT LIGHTS, No. 22,166.—F. Littlewood. Transparent tile or mosaic or vitreous mosaic or glass mosaic pavement light. Oct. 2, 1913.

PLATE ATTACHMENTS FOR SAUCERS, No. 22,794.—J. G. Nairn, sen. Plate attachments for saucers. October 9, 1913.

POTTERYWARE CLEANING MACHINES, No. 21,987.—G. E. Barlow and A. Jones. Potteryware cleaning machines. Sept. 30, 1913.

SEMI-CONTINUOUS KILNS, No. 20,525.—A. Moore and J. Malton. Kilns for burning lime and bricks on the semi-continuous principle. Sept. 11, 1913.

TEAPOTS, No. 21,799.—A. W. Thomas. Teapots and like vessels. Sept. 27, 1913.

TEA SET SHOW STAND, No. 22,571.—A. C. Houchin. Tea set show stand. Oct. 7, 1913.

TILES FOR ELECTRIC CABLES, &c., No. 21,446.—A. J. Howard. Tiles for carrying and protecting electric cables, gas pipes, water pipes, and the like. September 23, 1913.

TILES FOR WALL CONSTRUCTION, No. 23,011.—A. Hardoncourt. Wall construction and tiles or blocks therefor. (Con. date Nov. 29, 1912, U.S.) Oct. 11, 1913.

Specifications Published.

1912.

22,647.—Hall. Flower pot or similar vessel.
12,642.—Marion. Metallising ceramic and other surfaces.
24,921.—Bottomley. Continuous kilns for burning or firing bricks, tiles, or other earthenware, fireclay, or like goods.
20,882.—Brierley. Tiling and slating.
25,942.—Denley and Markin. Manufacture of tiles.

1913.

2,095.—Rider. Brick machines.
8,880.—Thomsen, Luii, and Van Dam. Imitation tiles.
4,011.—Clare. Teapots, coffee pots, and similar vessels.
10,177.—Klosters. Glass mosaics.
12,680.—Drewery. Lids for pudding basins and the like.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

622,808.—A. B. Pillivant, "Earnock," Hendon-lane, Finchley, N.
622,985.—C. T. H. Phillips, 103, Dartmouth-st., Burslem.
622,992.—M. Emanuel & Co., 41-2, Shoe-lane, E.C.
623,290.—J. Dixon & Sons, Cornish-place, Sheffield.
623,334.—E. Smyth, 224, Chester-rd., Sunderland.
623,553.—Jules Lang & Son, Charlton-place, Islington, N.
624,328.—J. Tams, Ltd., Crown Pottery, Longton.
624,368.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.
624,408-9.—Crown Staffordshire Porcelain Co., Ltd.
622,993.—C. K. Bamber, 9, Victoria-st., S.W.
623,294.—W. Adams & Co., Greengates, Tunstall.
623,413, 623,917.—H. H. Blanchford, 1, Fernleigh-villas, Rohais, Guernsey.
623,916.—The Worcester Royal Porcelain Co., Ltd., Worcester.
624,329.—J. Tams, Ltd., Crown Pottery, Longton.
624,410.—Wiltshaw & Robinson, Ltd., Copeland-st., Stoke-on-Trent.
624,495-6, 624,534.—J. A. Robinson & Sons, Ltd., Stoke-on-Trent.
624,646.—Hyposol, Ltd., 62, Hilliard-rd., Northwood, Middlesex.
623,233.—F. A. Norris & Co., 11 and 12, St. Andrew's-hill, Queen Victoria-st., E.C.
623,935.—Johnsen & Jorgenson, Ltd., 26 and 27, Farringdon-st., E.C.
624,848.—Grimwades, Ltd., Stoke-on-Trent.
622,323, 622,325.—Holophone, Ltd., 12, Carteret-st., S.W.
623,885.—A. R. Muller, 56, Shernhall-st., E.
623,967.—A. C. Gray & Co., Ltd., Mayer-st., Hanley.
624,234.—The International Bottle Co., 108, Fenchurch-street, E.C.
624,407.—C. A. Floyd, 226, Brixton-rd., S.W.
624,452.—G. Borgfeldt & Co., 23-24, Wall Strasse, Berlin, Germany. Address for service, c/o Abel & Imray, Bank-chambers, Southampton-buildings, W.C.
624,453.—H. H. Blanchford, Alton, Rohais, Guernsey.
624,742.—C. Carpenter, 62, Marmora-rd., S.E.
624,743.—C. Davidson & Co., Gateshead-on-Tyne.
624,855.—Fabrique de Machine "Mikron," Soc. Anon. 15, Mattenstrasse, Bienne-Madretsch, Switzerland. Address for service, c o Boult, Wade & Tennant, 111-112, Hatton-garden, E.C.
624,908.—Officina Parmense Sostanze Odorose O.P.S.O. Works, via Trento Parma, Italy. Address for service, c/o T. B. Browne, Ltd., 163, Queen Victoria-st., E.C.
625,089.—Wileman & Co., Longton.
625,114.—C. Carpenter, 62, Marmora-rd., S.E.
621,121.—The firm of Hermann Scholz Nachfolger, Camill Seidl, Siefenbacha, P. Bohemia, Austria, c/o Haseltine, Lake & Co., 28, Southampton-buildings, W.C.
623,886.—A. R. Muller, 56, Shernhall-st., E.
623,969.—Siemens Bros. Dynamo Works, Ltd., Caxton House, Westminster, S.W.
624,715.—C. J. Sutton, 19, Nelson-sq., Bolton.
625,349.—Doulton & Co., Ltd., Nile-st., Burslem.
625,525.—Soho Pottery, Ltd., Waterloo-rd., Cobridge.
625,537-8.—Booths, Ltd., Tunstall.
625,739.—Grimwades, Ltd., Stoke-on-Trent.
625,740-43.—The Worcester Royal Porcelain Co., Ltd., Worcester.

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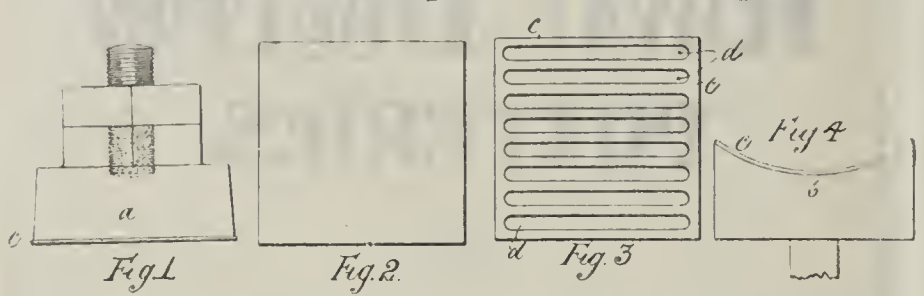
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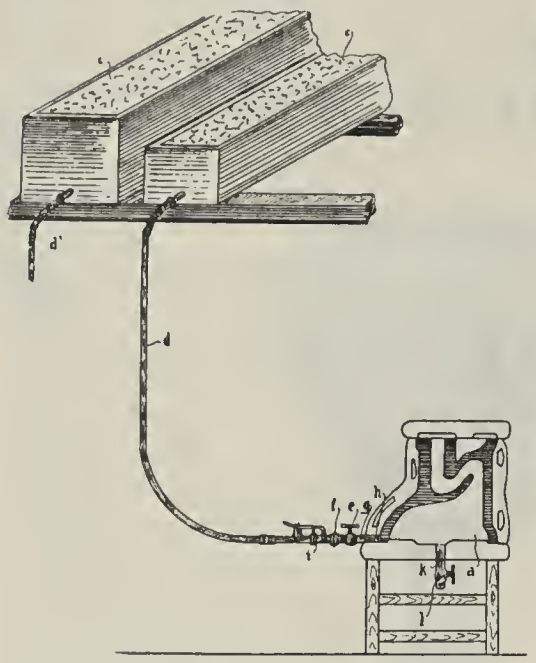
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Dies for Tile Presses.—H. Clarke, of 74, Pinnox-st., Tunstall, claims :—The improvements in or applicable to

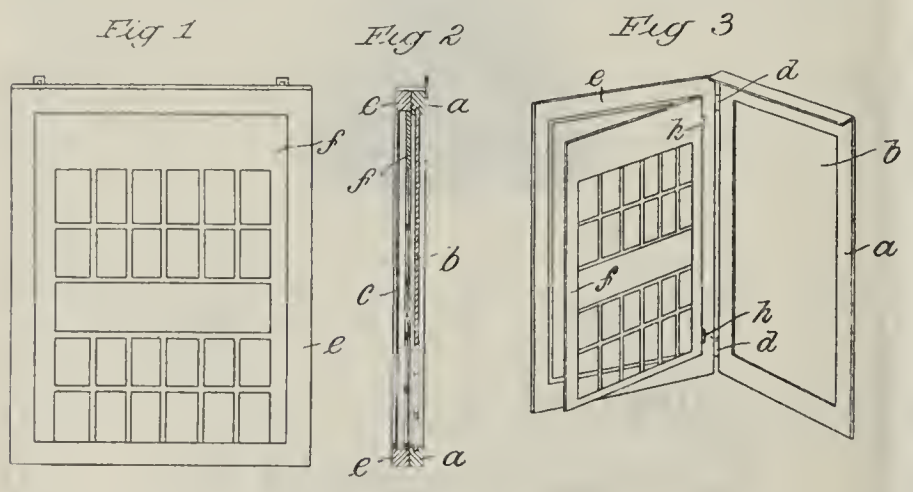


die blocks for tile and like presses consisting in providing them with permanent immovable renewable faces of thin metal soldered or otherwise secured to them.



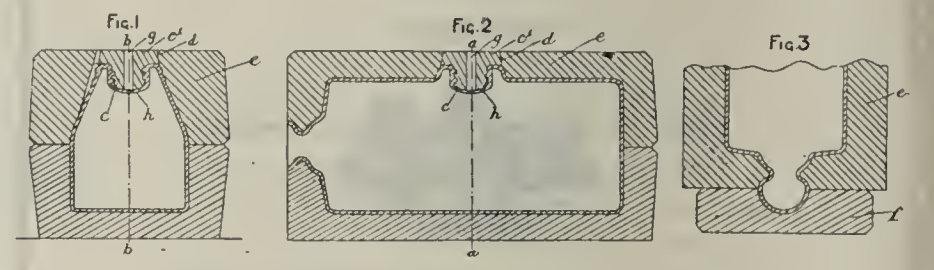
Engobing Earthenware.—M. Kopp and H. Kienberger, both of Modlan, Aussig District, Austria, claim :—A process for "engobing" earthenware, consisting in first filling a mould with "engobing" material, then letting the same quickly off, and finally filling the mould with poor-coloured material, thereby combining the upper surface of the moulding firmly with the "engobing" material of which a coating is left on the walls of the mould.

Glass Frames for Advertisements.—S. Zeretelli, of 1, Podolskaja Strasse, St. Petersburg, Russia, claims :—A frame of the kind described for exhibiting public announcements and advertisements comprising a wooden



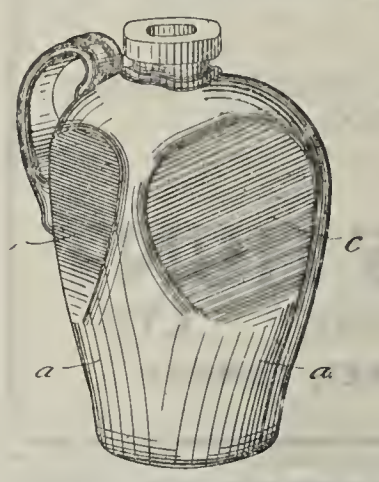
frame surrounding a back wall or panel, a second glass panelled frame hinged thereto, and an intermediate frame hinged to the second frame and provided with a number of compartments serving to contain the desired notices.

Manufacture of Footwarmers.—C. H. Heath, of Burton-rd., Woodville, and J. E. Dooley, of New-rd. Fields, Woodville, declare this invention to be as follows :—This invention relates to the casting of footwarmers and other screw stoppered vessels of earthenware by the employment of what is technically known as "slip." In the present method of forming such vessels plastic clay is usually employed and difficulty is experienced in forming the boss and helix of the screw socket. Our invention relates to a simple method of forming such helix, and in carrying the same into effect we employ a screw pattern and fix the head end of it by any suitable, detachable means in a recess or opening in the body of the mould or portion thereof : "slip" is then poured in, in the manner usually employed in casting earthenware articles, and when the desired thickness of clay has been left in the mould and the superfluous liquid poured out, the vessel is removed from the mould with the pattern screw-stopper in it ; this is now unscrewed and so forms the female helix or screwed socket which requires nothing further doing to it

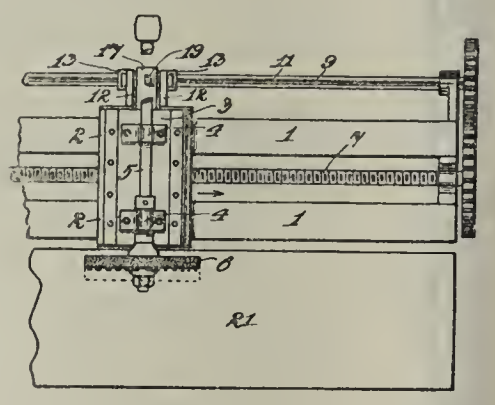


but the removal of the filled up end thereof ; this may be easily effected by any sharp-edged instrument.

Poison Bottles and Jars.—I. Bailey, of George Skey & Co., Ltd., Wilnecote Works, Tamworth, claims :—A poison bottle, jar or container formed in the ordinary way of a cross section that admits of it being formed on a wheel or rotary forming member and then whilst the material is in a suitable condition pressing the article to form one or more flats, depressions or other striking departures in shape upon it.



Glass Bevelling Machines.—H. G. Bradley, of 134, Hereford-st., Christchureh, New Zealand, claims :—(1) A glass bevelling machine having a revolving abrading wheel, the periphery of which is adapted to operate upon the glass, said wheel being adapted to travel longitudinally along the edge of the glass in a direction at right angles to the axis of such wheel, and also to reciprocate in a direction parallel to such axis. (2) In a glass bevelling machine as claimed in claim 1, the combination with means for supporting the glass or the like of a framework, a member slidable thereon in a longitudinal direction, a second member adapted to reciproeate transversely upon the aforesaid member, an abrading wheel revolvably mounted upon said transversely operating member, and means for actuating said motions simultaneously. (3) In a glass bevelling machine the combination with a suitable frame-work and means for supporting the glass, of a member slidable longitudinally upon such framework, a leading-screw adapted to effect the longitudinal travel of said member, a second member slidable in a transverse direction on the first member, a rocking lever adapted to reciprocate said transverse member, a longitudinal shaft, a cam keyed and slidable thereon, and adapted to operate said lever, an abrading wheel revolvably mounted upon said transverse member and disposed with its axis parallel therewith, and with its periphery in contact with the glass, and means for simultaneously rotating the said leading screw, shaft, and wheel.



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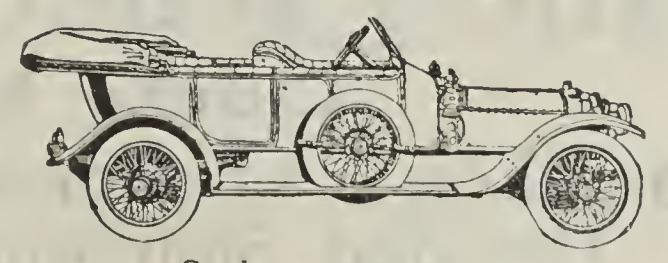
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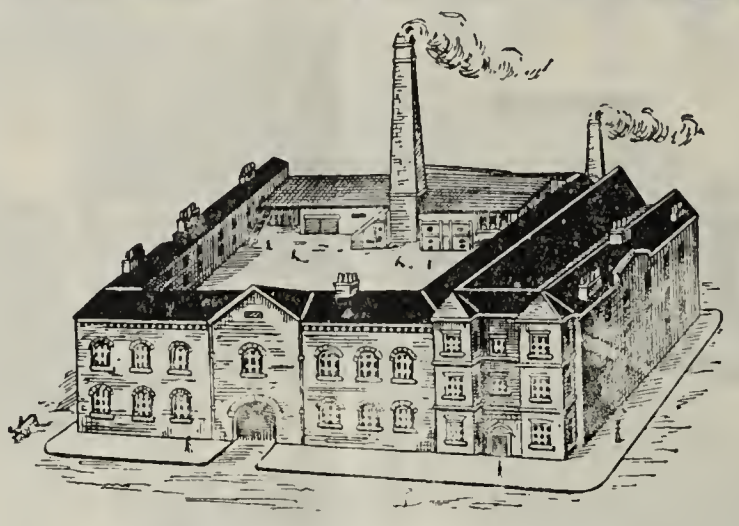
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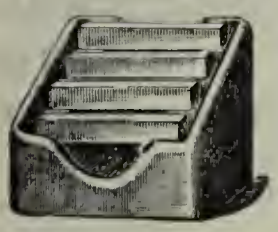
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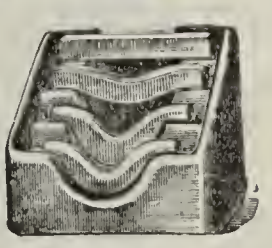
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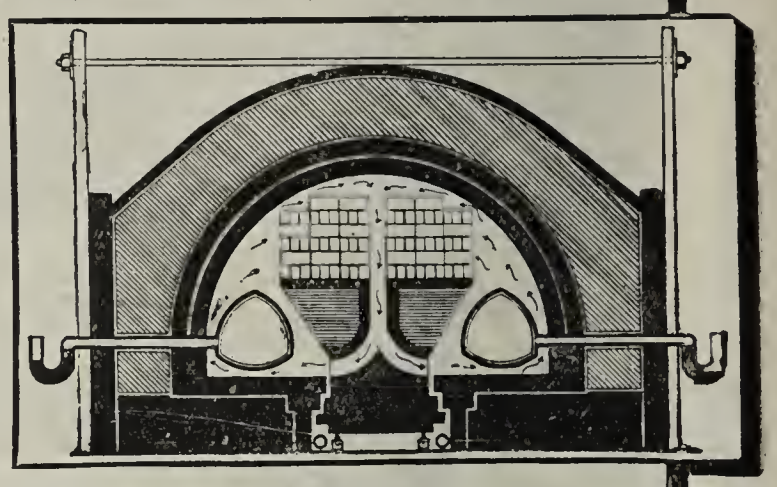
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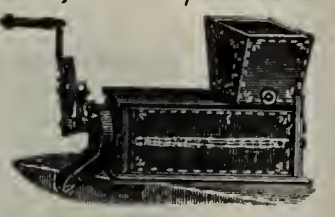
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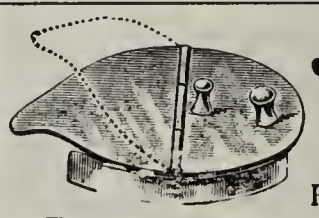
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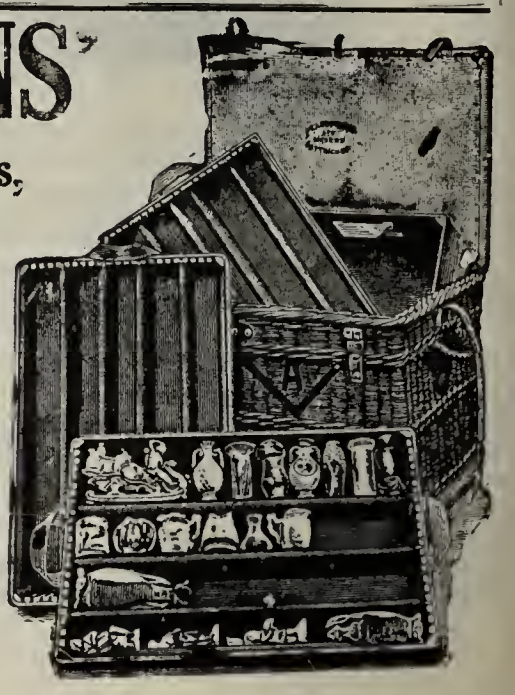
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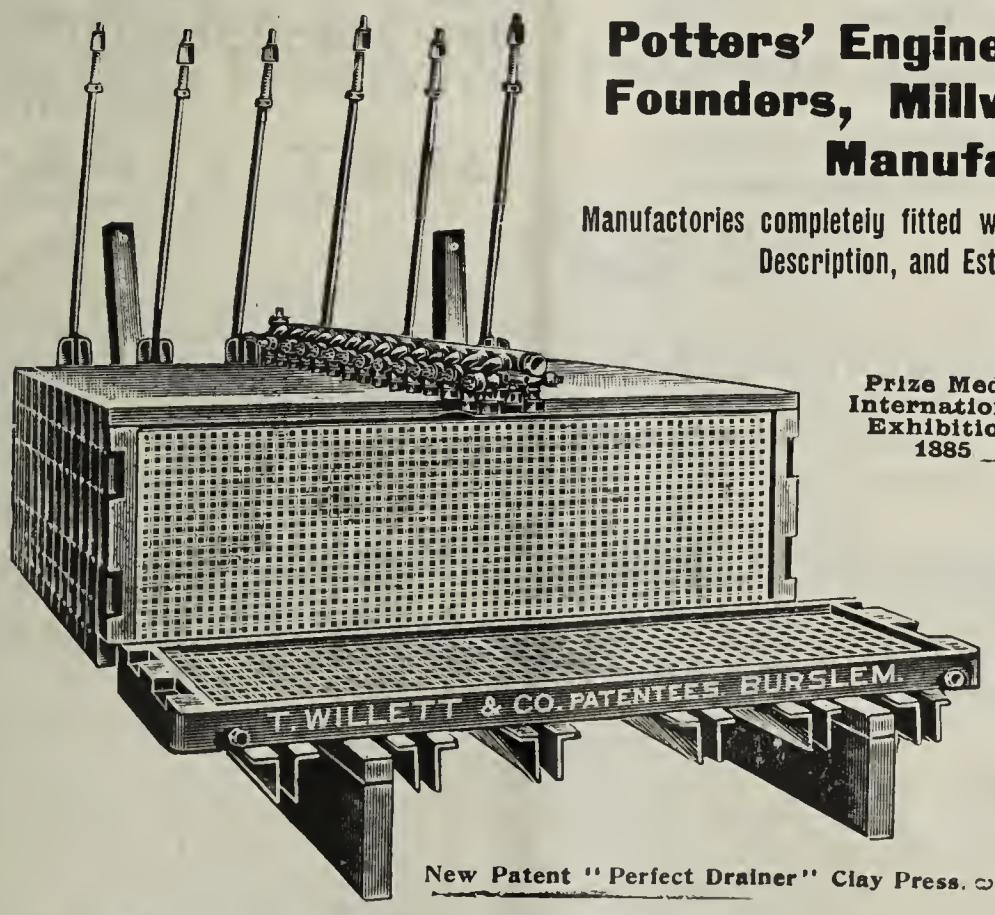
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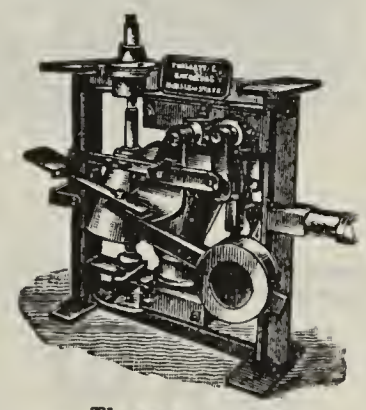


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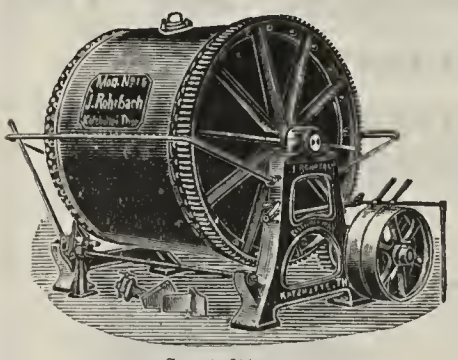
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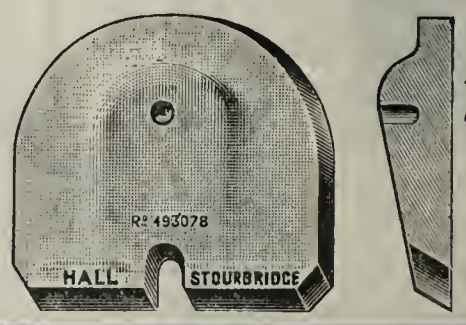
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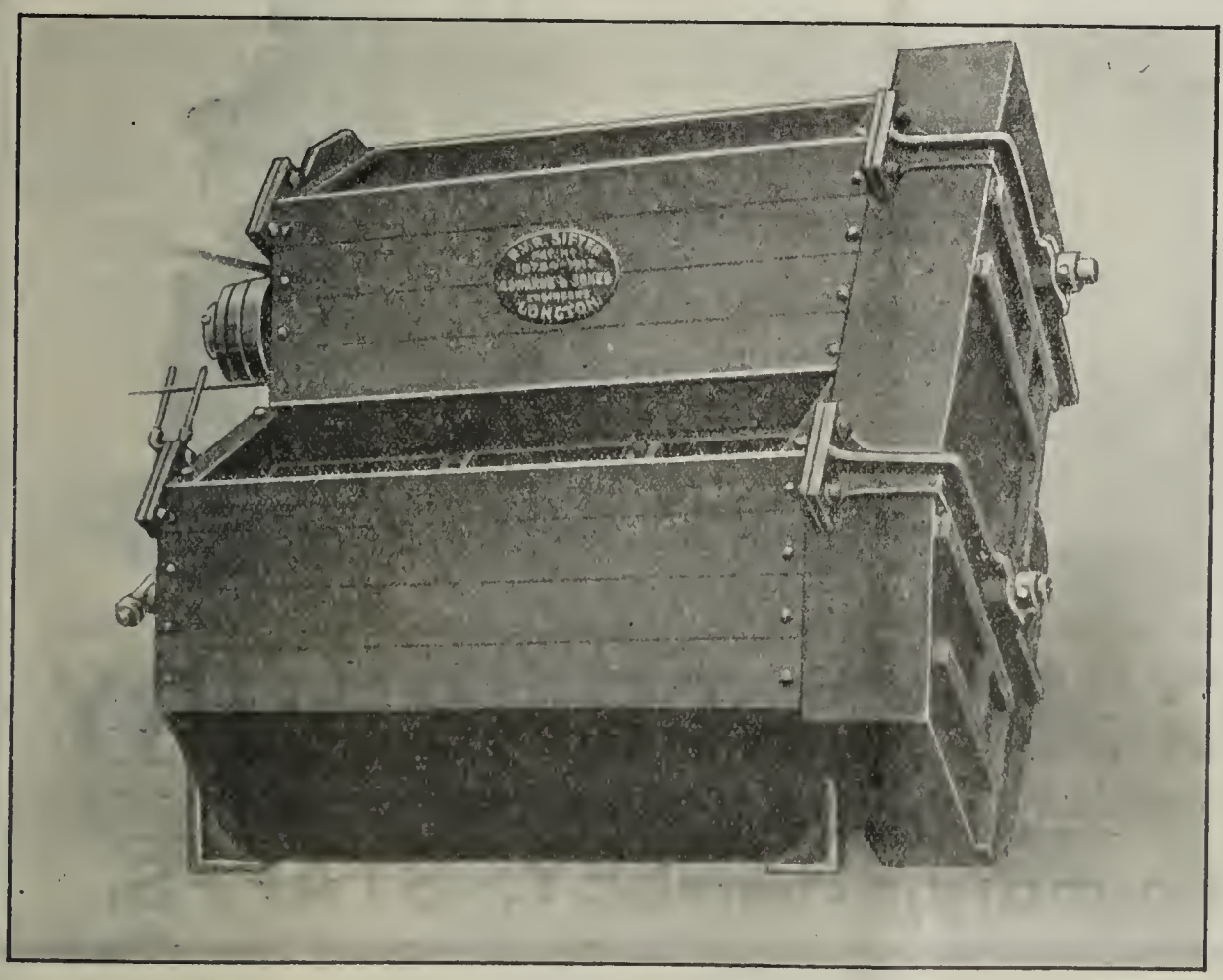
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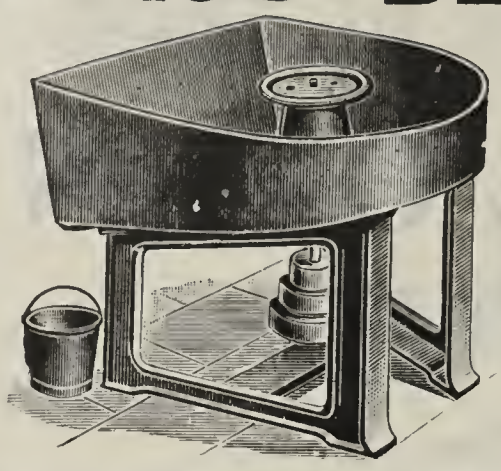
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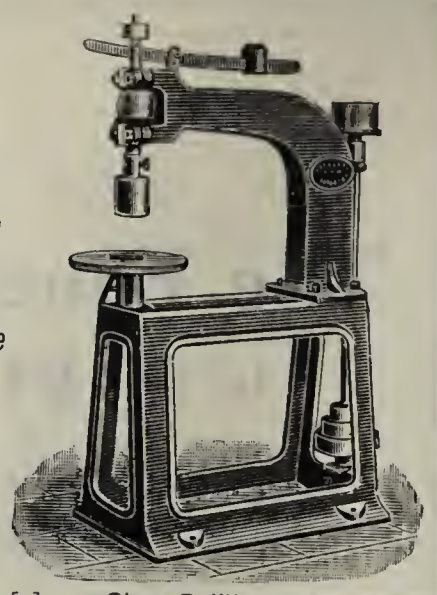
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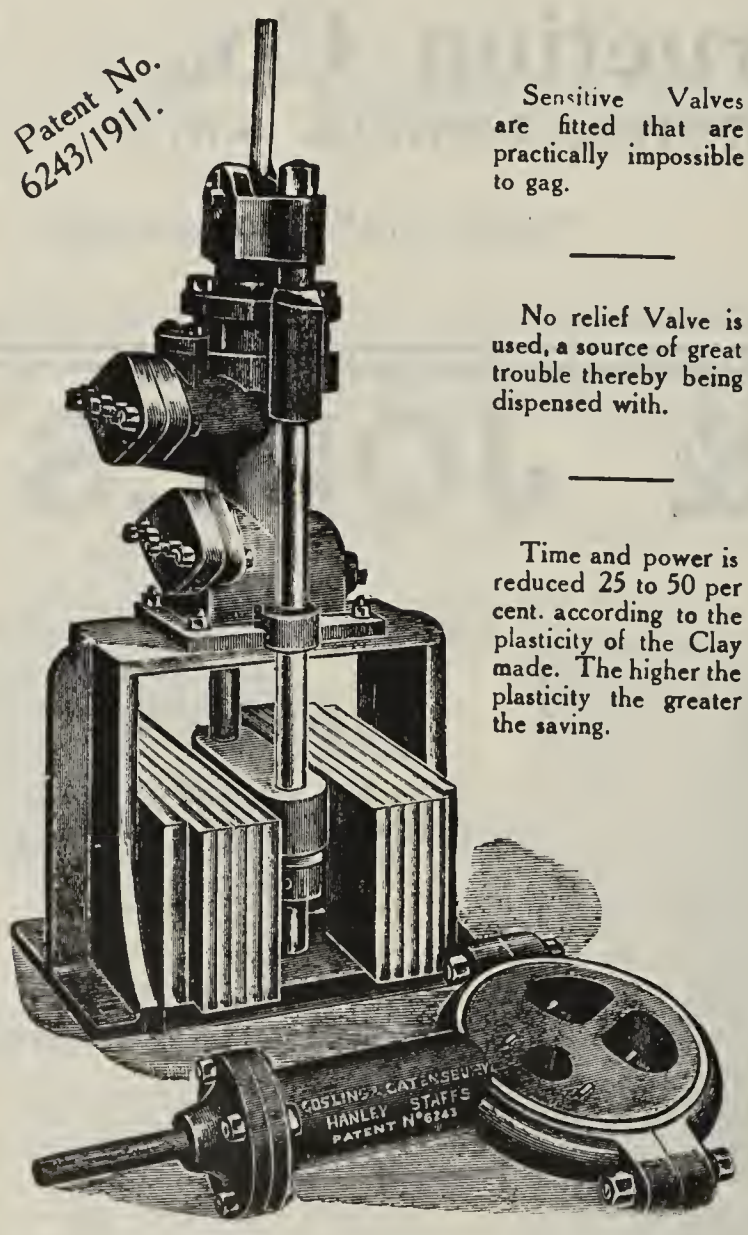
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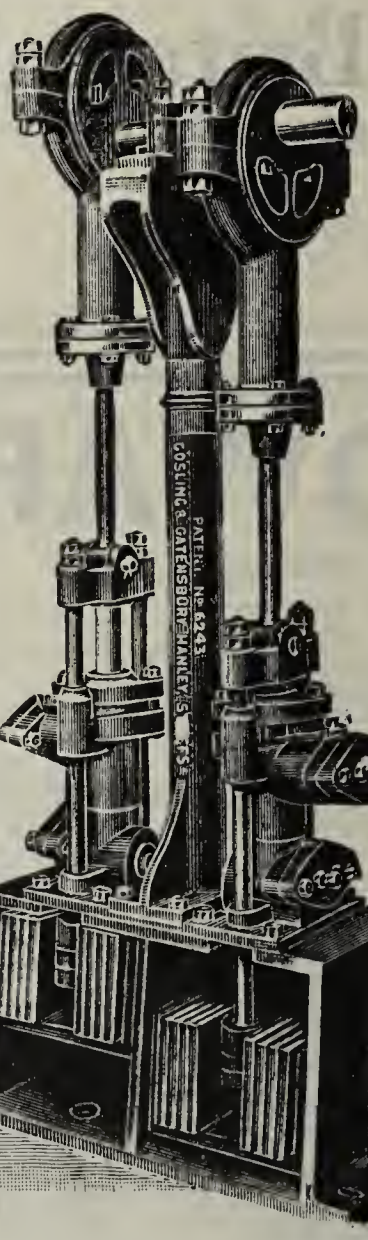
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FOR LITERARY CONTENTS SEE PAGE 1367. INDEX TO ADVERTISERS, PAGES 1345 and 1348.
All Advertisement alterations for the January Issue must reach us by December 18.

All announcements for this Heading for January issue must reach us by first post on December 29th.

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(CONTINUED ON PAGE 1336.)

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continued from page 1334.

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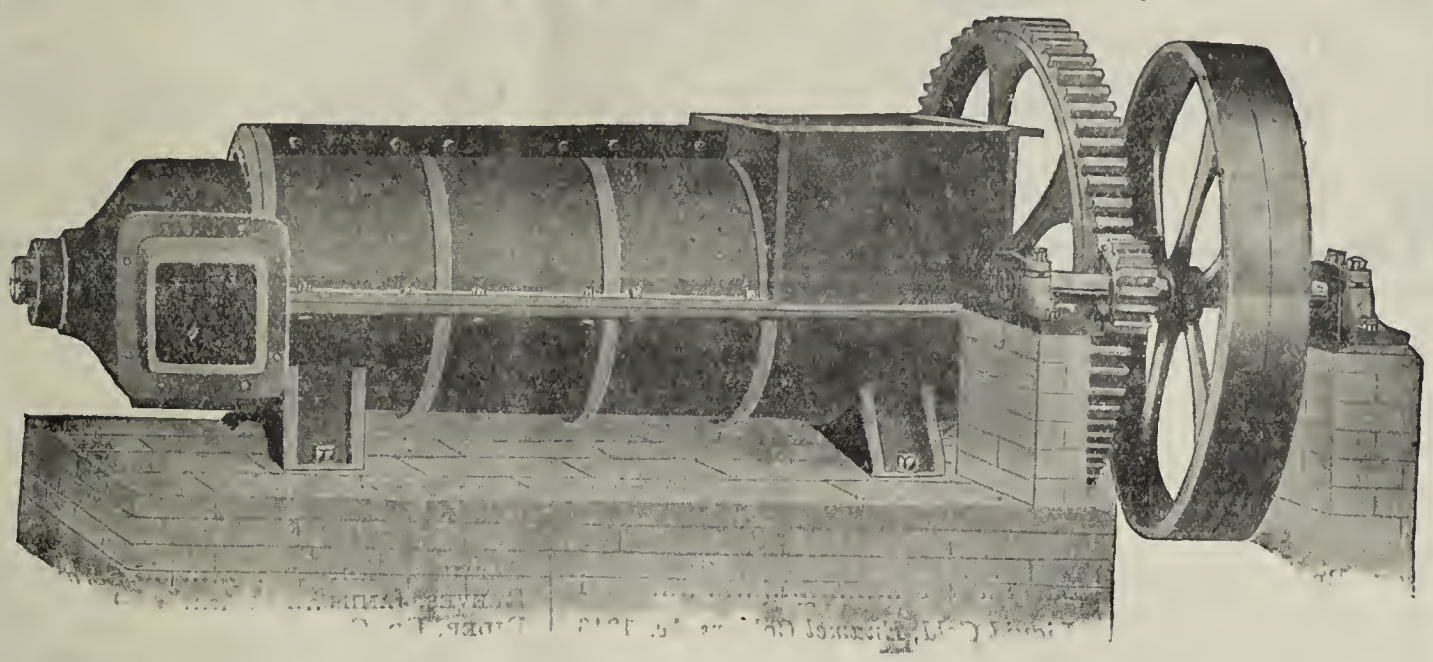
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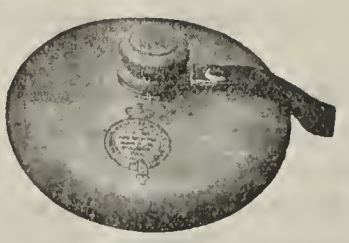
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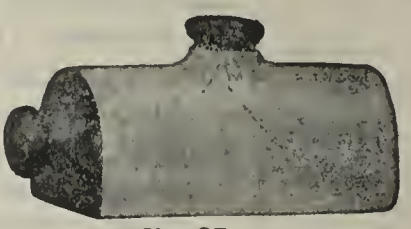
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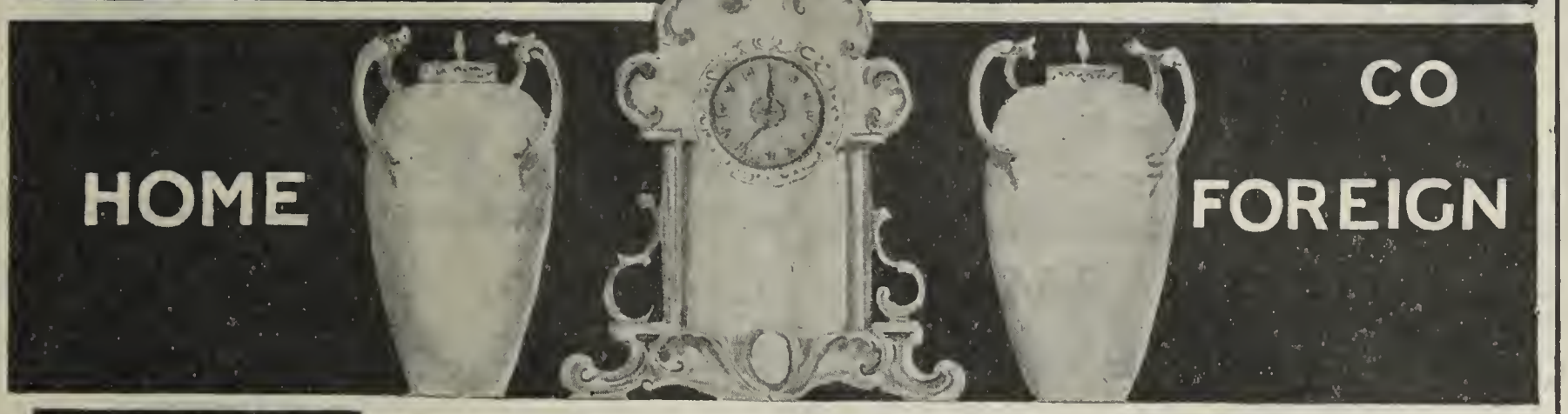
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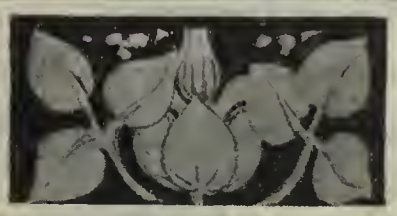
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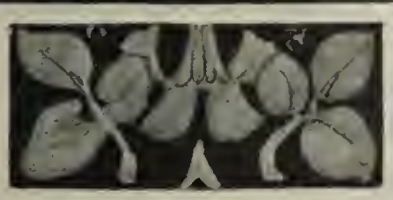
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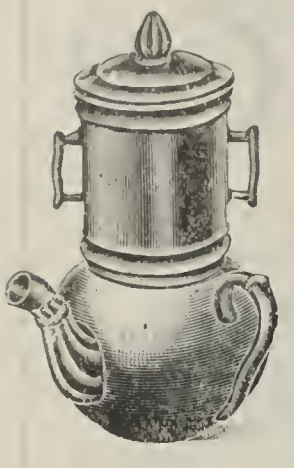
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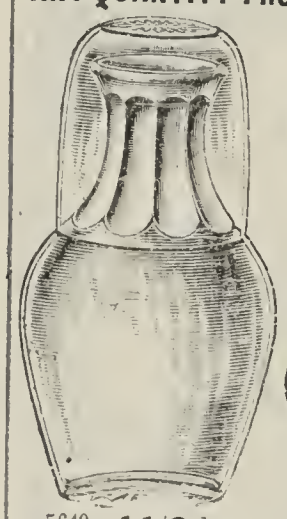
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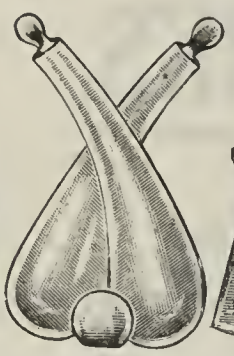
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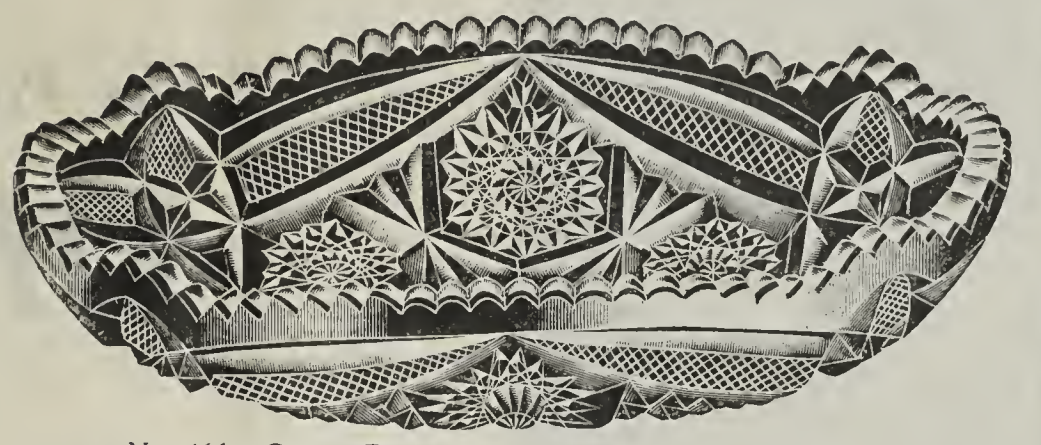
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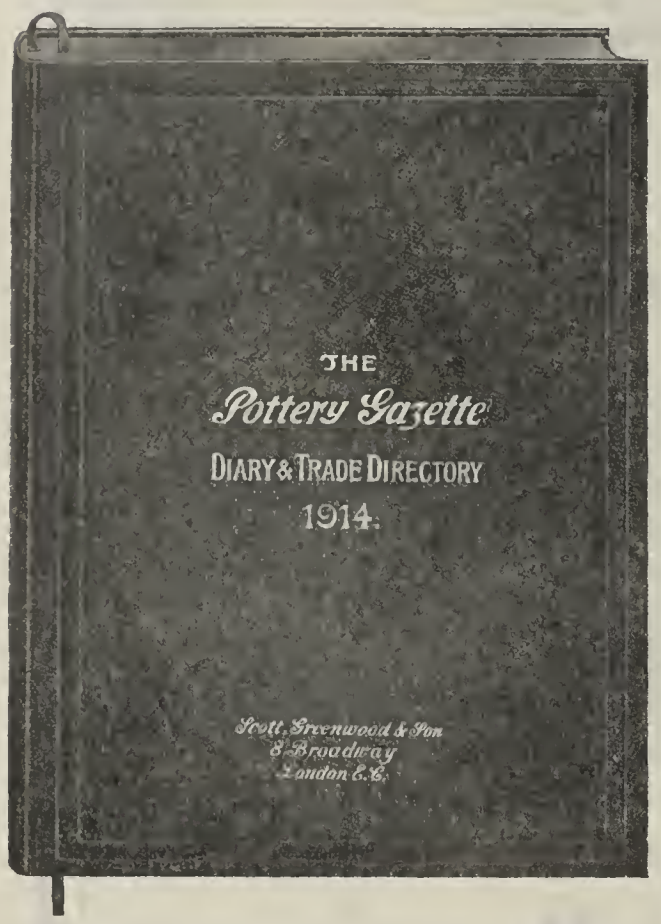
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for 1914

CONTENTS.

Directory of London Agents and Showrooms of British and Foreign China, Earthenware and Glassware Manufacturers with names of Firms represented.

Directory of Trade Marks used on *Modern China, Earthenware, Decorated Tiles* and *Glassware.* (Over fifty new Marks have been added to the 1914 edition).

Directory of British Manufacturers of *China, Earthenware, Majolica* and *Glass; Potters'* and *Glassmakers' Materials* and *Machinery;* China Clay Miners, &c.

(The North Staffordshire Pottery Manufacturers are arranged both alphabetically and under the various Pottery Towns.)

Directory of Export Merchants shipping China, Earthenware and Glassware with Countries to which Goods are Shipped.

Sketch Plan of the City of London, showing the Principal Streets where Pottery and Glass Showrooms are to be found.

Scale of Prices for *English China Tea, Breakfast,* and *Dessert Services.*

Scale of Prices for *English Earthenware, Dinner, Toilet, Tea and Dessert Services* and *Miscellaneous Earthenware.*

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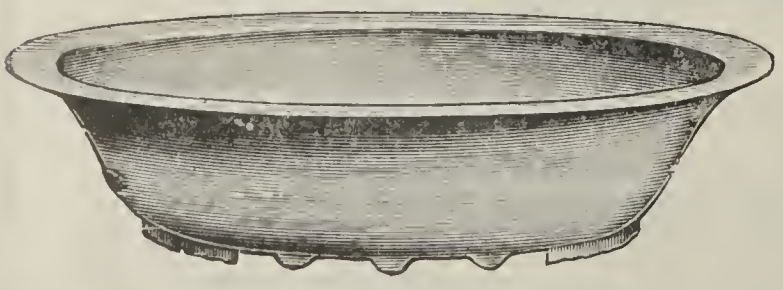
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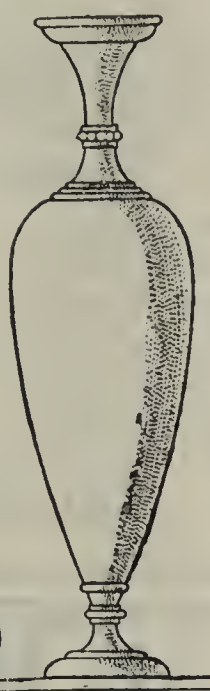
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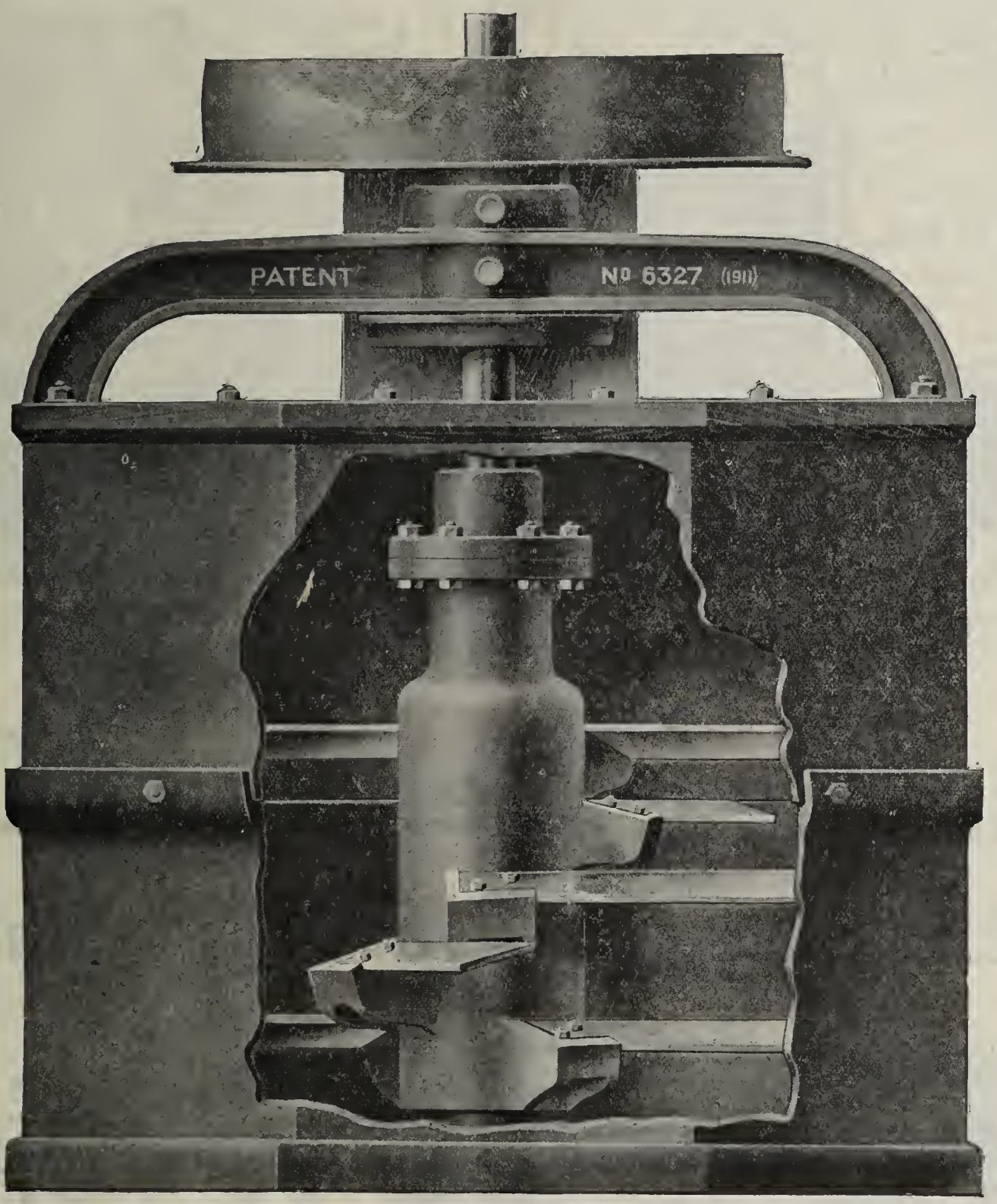
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Editorial Notes.

A SUGGESTION FOR RETAILERS' CIRCULARS.

IN deciding on any form of advertisement, it is as well to consider what kind of reception it is likely to meet with at the hands of those to whom it is desired to appeal, for neglect of this consideration is the cause of much money being wasted every year. Take the case of the circular sent out in an open envelope bearing a halfpenny stamp, and follow this to the house of the addressee. At the breakfast table the head of the house inquires: "Anything in the post for me?" and receives from his better half the answer: "No, only a circular!" That finishes the matter, and the circular comes to an ignoble, though not unmerited, end. The commonplace individual passes unobserved in a crowd; but not so the man who exhibits some distinctive characteristic. He draws the attention and criticism of the passers-by. So should it be with an advertisement. For example, a retailer desires to make his wares known to the inhabitants of a medium-sized town. If he circularises them through the post in the ordinary way the result will be, in general, that recounted above.

A more promising method, which appears to embody the element of novelty to a degree which should ensure success, is suggested in a German retailers' paper. Have printed a number of visiting cards, about 2½ in. by 4 in., with name and address on the face, and on the other side: "Desires to call your attention to the following special offers for the . . . . season:— . . . . . Price . . . ." (About three lines will be sufficient for the purpose.) Each of these cards should be sent by letter post in a white envelope of suitable size, the total difference in cost as compared with a circular being the extra ½d. for postage. The reception accorded is very different, however, the card being hailed as "quite an original idea," read carefully, and kept to show to friends; so that the advertiser has started quite an active propaganda at very little more than the cost of the useless circular.

THE SUPPLY OF FUEL.

IT is satisfactory to see from a letter in our "Correspondence" columns that one at least of our subscribers realises the enormous importance of the present situation as regards fuel. We have been passing through several years of exceptionally good trade when business has been active and prices have been comparatively high; but it is the almost universal opinion in commercial circles that the top of the boom has been seen, and that we are now slowly descending into the valley of the quiet trade which will possibly lead us to a time of depression. If our manufacturers have felt the inconvenience of dear fuel in the piping times of the boom, how much more severely will they feel it during the years of depression! We, as a business people, are to be weighted with heavier railway charges; we have to bear the cost of the national insurance and the incidence of rising taxes for national defence, and rising rates for local purposes. We say nothing whatever against any of these extra expenses, many of which may be, and probably are, necessary; but there is no rational cause why the community should submit tamely to a conspiracy between labour and capital in the coal trade which has for its object the main-

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and at the American and Colonial Agencies mentioned above.

tenance of high prices for fuel. This way national industrial ruin lies, and if the ordinary laws of competition fail to protect us in this particular instance, something will have to be done to supplement them.

We should like also to inquire what measures, if any, are being taken to meet the special requirements of the Potteries in this respect. At the time of the coal strike various schemes were mooted, and since then the matter has been publicly referred to once or twice, but we believe that nothing has actually been done in the way of providing reserve supplies of coal or some alternative fuel. In fact, another coal strike or similar national emergency would find the Potteries just as helpless as before; and then all the talk that has ever been uttered will be of very little use. The most promising outlook appears to be for a more extended use of gas firing, as large stores of gas could be accumulated in suitable reservoirs in readiness for any emergency.

POTTERY EXPORTS IN OCTOBER.

THE October exports of pottery were rather better than those of the preceding month, but in comparison with the corresponding month of last year they show the heavy decline of £50,000. The total was £297,150, as against £348,018 in October of 1912, and £316,553 in 1911. The greatest decline was in the case of Canada, the shipments to which country were only of the value of £39,815, a decrease of over £16,000 in comparison with the same month last year.

The exports to every Colonial market, though not to the same degree, show declines. The Australian shipments, amounting to £26,189, were close on £9,000 below the same month last year; and the New Zealand, totalling up to £13,212, were less than two-thirds of the exports in October, 1912. British East Indian trade was lower by nearly £4,000, and the S. African by over £3,000. The South American exports were practically the same in October as September, but in comparison with October of last year trade with Brazil was worth £3,000 less. The only instance of substantial increase was in the case of the United States, which country took £47,674 worth of British pottery, as against £42,010 in the same month of last year. This improvement was doubtless due to the new tariffs having become operative early in October, but the increase was not so great as to suggest that any quantity of pottery was held up awaiting the decline of import duties. Despite the decreased exports of the last three months, the total for the ten months is still well above the aggregate for the corresponding period of last year, the figures being £2,853,073, compared with £2,564,649.

While the exports decline, the imports of pottery advance, the total for October being £99,084, as against £83,235 in the same month of last year. The most marked increase was in the case of china goods, the figures being £20,162, compared with £13,461 in October of last year. The aggregate imports for the ten months were £884,098, as against £808,840 in the same month of 1912.

INDUSTRIAL ESPIONAGE.

ONE of the unsatisfactory concomitants of modern industrial life is the regrettable frequency of attempted subornation of employees, by trade rivals, for the purpose of obtaining particulars of valuable trade secrets. Another instance of such industrial espionage has lately been brought to light, this time in Germany, and has led to the punishment of the offender by the courts, under the provisions of the law against Unfair Competition. As reported, the junior partner of a firm of shoe hooks and eyelets approached an engraver in the employ of a rival firm at a dance, and, without disclosing his own position, made numerous inquiries as to the number of engravers employed, the methods of manufacture, and the state of a certain civil action which was then pending, obtaining this information under a promise of secrecy. The engraver afterwards ascertained the position of his interrogator and, at their second encounter, was less communicative, though plied with a number of questions as to the machines used by his employers, the method of lacquering, the sources of supply of the lacquer and zinc plate used, and whether any novelties were being introduced. The engraver having told his employers what was going on, an action was commenced, and the Elberfeld District Court imposed a fine of 140 mk. on the defendant for attempting to obtain the betrayal of trade secrets. An appeal by the defendant against this decision has just been dismissed by the Penal Senate of the High Court.

In this country such practices have received a severe check by the passing of the Prevention of Corruption Act and the commendable activities of the Society for the Prevention of Corruption; but that they have not been altogether stamped out has been shown by some fairly recent chemical trade cases. The Act might certainly be made to apply to some cases of copying potters' designs or methods if an employee of the victimised firm could be proved to be an accomplice.

Ruby Glass Recipes as follows are given in a recent issue of "Sprechsaal":—(1) Copper-Ruby Glass.—Sand 100 parts, potash 20, borax 18, red lead 30, cuprous oxide 3, tin oxide 1, manganese dioxide 2, soda 8, saltpetre 4, cream of tartar 2 parts. Selenium-Ruby Glass.—Sand 1,000 parts, potash 150, soda 150, marble 120, saltpetre 10, selenium 1·25 parts. (2) Selenium-Ruby Glass.—Sand 110 parts, soda 25, potash 30, cryolite 2, lime 16, sulphur ½, cadmium sulphide 1½, sodium selenate 1 part. Copper-Ruby Glass.—Sand 100 parts, potash 30, red lead 15, lime 8, bones 1, tin chloride 1, tin oxide 1½, cuprous oxide 1½ parts. (3) Copper-Ruby Glass.—Sand 1,000 parts, soda 280, lime 150, red lead 60, copper oxide 20, tin oxide 20, ferrous oxide 2, cullet 500 parts. Selenium-Ruby Glass.—Sand 1,999 parts, soda 150, potash 120, red lead 280, baryta 120, stannous oxide 25, ferrous sulphate 40, selenium ¼ part. (4) Copper-Ruby Glass.—Sand 1,000 parts, red lead 250, potash or soda 300, borax 50, copper oxide 5-1½, tin ash 6 parts. Selenium-Ruby Glass.—Sand 1,000 parts, soda 360, calc spar 200, sodium selenate 4-8 parts. (5) Copper-Ruby Glass.—Sand 100 parts, potash 30, borax 6, red lead 20, saltpetre 8, cream of tartar 2, cuprous oxide 6, stannous oxide 6, ferric oxide 1 part. (6) Selenium-Ruby Glass.—Sand 1,000 parts, potash (60/65) 220, soda 120, lime 200, red lead 200, cullet 500, manganese dioxide 2½, selenium 1¾ parts. Copper-Ruby Glass.—Sand 1,000 parts, potash (60/65) 200, soda 80, red lead 300, borax 80, cuprous oxide 50, tin ash 50, cream of tartar 15, ferric oxide 5 parts. (7) Selenium-Ruby Glass.—Sand 1,000 parts, soda 350, ground marble 150, sodium selenate ½ (or selenium 0·3) part. For Copper-Ruby Glass replace the selenium ingredient by 5 to 10 parts of cuprous oxide. (8) Copper-Ruby Glass.—Sand 100 parts, potash 16, soda 18, red lead 10, limestone 10, tin ash 2½, copper sulphate 4, ferrous sulphate 4 parts. Selenium-Ruby Glass.—Sand 100 parts, potash 16, soda 18, red lead 10, limestone 16, sodium selenate 1 part.

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FOLLOWING ON THE RECENT ROYAL VISIT TO LANCASHIRE WE HAVE RECEIVED AN OFFICIAL INTIMATION THAT **HIS MAJESTY KING GEORGE V.** HAS BEEN GRACIOUSLY PLEASED TO AUTHORISE US TO DESCRIBE OUR WELL-KNOWN ARTISTIC PRODUCTIONS AS THE

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THE IDEAL MANUFACTURER.

OUR latest Prize Competition has proved one of the most interesting of the series, both with regard to the lack of attention which it received from one section of the trade and the considerable response which it called forth in another. Our offer of a prize of three guineas for the best paper on "An Ideal Dealer," written by a manufacturer or a manufacturer's agent, was entirely ignored by these gentlemen, for there were no entries. Do they consider that such a person as an "Ideal Dealer" could not exist, or is it rather, as we prefer to believe, that they find all dealers approach so nearly to the ideal that they regard the characterisation of any particular one as superfluous?

On the other hand, the similar prize which we offered for descriptions of the "Ideal Manufacturer," open to dealers or their employees, has brought quite an embarrassing result, both in regard to the number and the quality of the contributions. The absence of claimants for the other prize has, indeed, proved somewhat of an advantage, as it has relieved us from the invidious task of choosing between the practically equal merits of the two best papers and enabled us to award a prize to each. The fact that the writers have both figured as prize-winners in previous competitions speaks strongly for their literary abilities, as we need hardly say that the adjudication was based solely on the qualities of their contributions, irrespective of the personality of the writer.

Of the other papers, the longest was very ably written, but it dwelt rather too severely on the faults of the un-ideal manufacturer, thus indicating the desirable characteristics of the ideal manufacturer in a somewhat negative manner. The remaining contributions all suffered more or less from too narrow a limitation of their scope, but we hope in our next issue to quote some extracts which will show how remarkable a consensus of opinion prevails among dealers upon certain points, and will give our friends the manufacturers a few hints as to what is to be expected of them. Nearly all the competitors seemed to regard the "ideal manufacturer" as a "consummation devoutly to be wished for" but never likely to be realised in this imperfect world. One of the prizewinners, however, we are pleased to learn, is so fortunate as to know of a manufacturer who reaches a height of perfection that may be regarded as the "beau ideal."

We print below the two papers to which the prizes have been awarded:—

PRIZE PAPER, by Mr. J. G. STEWARDSON, 221-3, Westgate-road, Newcastle-on-Tyne.

The Man.—First and foremost, the ideal manufacturer must be a man of many parts; and also one who realises that his interests and those of the dealer are not separate or inimical, but are inseparably interwoven, if not identical.

Without this conception of business relationship, it is impossible for any manufacturer to be ideal, in the conception of the dealer. He must understand not only the manufacture of marketable pottery and the disposal of it to the dealer, but he must also have some knowledge—or at least understanding—of the trading conditions of the wholesaler and retailer.

His principles.—He must be a man of absolute integrity, straight in all his dealings, and one who endeavours to see that such integrity and straightforwardness characterises his staff, from representative to office-boy, from head warehouseman to packer's boy. Business, to be done on ideal lines, must be done with absolute honesty and perfect frankness. He should decline to be imposed upon, but should equally abstain from seeking to impose upon, or get the advantage of, his customer; and impress such principle upon those who work for him. Cuteness and diplomatic lying may enable a manufacturer to get out of many difficulties, to get the advantage over those he deals with; it may even enable him to establish a huge business or make a fortune, but it can never give him satisfaction of a clean reputation or give him a satisfied clientèle. In short, to be ideal, a manufacturer must not only be a business man, but also a man of principle, which principle should be impressed upon the actions of all his staff.

His methods.—To understand the dealer's requirements, as far as practicable, to act towards the dealer as he would desire to be treated, were he in the dealer's place, is the first essential in the ideal manufacturer's methods. Perhaps nowhere more than in his office, or offices, has a manufacturer a better opportunity of carrying this ideal principle into practice, and perhaps nowhere is it more neglected. In ideal trading, promises made are earnest obligations to be faithfully and honourably carried through—or reasonable explanations offered. Yet, in thousands of cases, promises definitely made are violated through carelessness, or, where it is impossible of fulfilment, because of technical difficulty or damage in production, no explanation is offered to the dealer until he has written, in some cases repeatedly. Hence the ideal manufacturer is one who causes every promise made to be entered into a "promise-book," with the date of promise opposite to it. This book will be under his own supervision, or that of his manager, who will see that such promise is kept—or know the reason why; and will cause the dealer to be advised of such reason. The withholding of such information is unreasonable, unbusinesslike, and discourteous, and it is often detrimental to the best interests of the dealer, who, in confidence, has probably made a promise to his customer.

Acknowledging orders.—Again, the acknowledgment of every order—even if it be only for a teapot cover—is an essential in ideal business; for how is a dealer, otherwise, to know that his order has been received and put in hand?

Correspondence.—In his office, every letter will receive not merely acknowledgment, but its import and inquiry receive full consideration, and a reply "per return" made, if possible. To allow several days to elapse before replying—or to make only partial reply—overlooking, as so many do, some of the most important details in a letter, thus causing the dealer to write again, is neither just nor businesslike. The tradesman's time is as valuable to him as the time of the manufacturer or his clerk is to them, and the ideal manufacturer recognises this.

Empties.—He it is who also has a definite system for the receiving of "returned empties," and who sees that the receipt of every empty is duly entered, with its number and description; and who also sees that the sender is duly advised of its receipt same day as received. He will further see that if empties, which have been duly advised, are not received within a reasonable time, the sender be communicated with in order that he may take the matter up promptly with the railway company.

Matchings.—These are at once the bane of the manufacturer, as they are of the dealer; but the ideal manufacturer will realise that they must receive proper consideration, especially if the application for same is made by one who deals regularly with his firm.

If the wholesaler or retailer induces the public to take a firm's goods, then it is the duty of that firm to enable the dealer to retain his customer, by supplying matchings of such goods when required, even at considerable inconvenience and sacrifice. Such inconvenience and sacrifice is fully mutual, but the loss to the dealer is greatly in-

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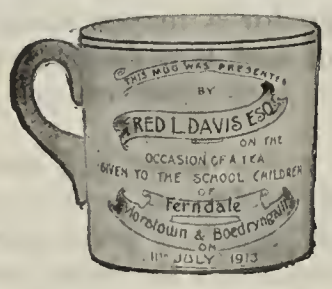
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To Messrs. Grimwades, Ltd. **[Copy of Letter received from Customer.]**

Dear Sirs, Ferndale, Glam., 16/7/13.

I beg to thank you for the excellent way in which you carried out our order placed through Messrs. . . . . of Cardiff, in connection with the above function. The mugs have given every satisfaction, and travelled without one having been broken. The order was carried out very promptly, and no inconvenience caused in any way.

Again thanking you, yours faithfully, DAVID HANNAH.

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creased if he has to repeatedly write for same, or if his instructions as to sending of same are disregarded, as they ofttimes are.

Concession.—Circumstances, which are peculiar to our trade, frequently arise through breakage, misunderstanding of instructions to despatch, excessive packing charges, faults of selection, &c., and it is just here that the "sweet reasonableness" of the ideal manufacturer will pre-eminently serve to smooth over such difficulties. His willingness to make reasonable and fair allowance will often clear matters, which, if not equitably adjusted, rankle in the mind of dealer, and may even lead to the closing of a long-established account.

Organisation.—In the organisation of his warehouses, the "ideal" ability of a manufacturer is most acceptably proven. The keeping up of his stocks of "biscuit" and white ware, against all reasonable requirement, a careful anticipation of the demands of the dealers, or of a season's trade, these are two characteristics which place him in high esteem with the dealer. Every system which will assist in this direction will be adopted by him. That firm is most appreciated by the dealer which gives him promptest supply, and which does not allow him to create a demand, and then to lose sales by having to wait for current lines, until the demand has gone "off."

Smart anticipation.—The manufacturer who is quick to realise when he has produced a good thing, and has the daring to get large stocks made against almost certain requirements, is the man to whom the dealer's heart (and orders) goes out, and who makes mutual trading a pleasure. For when the dealer is shown a "good" thing, he wants it "now," while he is keen and enthusiastic; but if it is two to three months before his supply comes to hand, his interest and enthusiasm has often gone "dead."

Open ear and mind.—Further, the ideal manufacturer is one who is careful in the selection of his representative, but who, when he has chosen him, will give him his full confidence, and all reasonable "power of attorney." For he is the manufacturer's deputy, and the dealer regards him as such, and addresses his inquiries and suggestions to him as such. The manufacturer should, therefore—and the ideal one will—give earnest attention to the inquiries and the suggestions of his representative, for the latter will know more of the dealer's requirements and of public taste and competitive lines, than himself. He will also keep an open ear to any suggestion the retailer may make to him through his representative, and show a willingness to assist the dealer in every possible way. He will not be above taking a hint when a new and good idea is given to him, or above showing his appreciation when good results follow the adoption of the good idea. He will be willing, at all times, to assist both his representative and the dealer in every possible way towards the development of mutual trade, regarding the dealer's goodwill as a valuable asset in his business.

A manufacturer possessing all or most of these virtues may seem to be too "ideal" to practically exist, but this is not so. My mental vision is fixed on one such at the present moment of writing, and I value him at his real worth.

PRIZE PAPER, by Mr. W. D. REDINGTON, 120, Barndale-road, Mossley Hill, Liverpool.

Idealism is an ethical standard to which many aspire, but seldom attain. A paper of this description will, however, prove an admirable medium for portraying "the ideal manufacturer" as he ought to be, revealed by the clear and penetrating searchlight of "the ideal dealer's" unerring scrutiny.

The path of the manufacturer in the pottery and glass trade is beset with many little difficulties which hitherto have been deemed insurmountable—a path strewn with futile attempts at reconstruction. But the "ideal manufacturer" is not daunted thereby; neither is he simply a blind seeker after the new and uncultivated. A creator of precedents he may be, for he realises that the old order must give place to the new; and to this end, in his desire for success and his determination to succeed, he directs ceaseless effort and constant labour. He is one who, without in any way sacrificing his individuality or style, will endeavour to the utmost of his ability to meet all the requirements of the "ideal dealer."

The "ideal manufacturer" has a thorough grasp of all the details of his business, and recognises amongst the first principles thereof that the dealer is what is known in some trades as a "middleman." In other words, the manufacturer is responsible principally to a comprehending dealer, whereas the dealer is dependent on the manufacturer, and responsible to a very exacting and often ignorant public. With this fact in mind, the "ideal manufacturer" gives careful and constant attention to those many details which, though apparently trifling, really constitute a large part of the daily routine. As Plutarch truly says, "Trifles make perfection, yet perfection is no trifle." The man who masters the details is on the sure road to perfection!

(1) As to matchings—troublesome, trifling, and usually unprofitable to both manufacturer and dealer—the "ideal manufacturer" will, as far as possible, execute these with alacrity and dispatch, knowing that a satisfied customer is a regular customer. He will not give a date for delivery haphazard, and keep no further trace of that date. If a promise has been made for delivery it will be adhered to, and if through unforeseen circumstances this becomes impossible, he will give due notice of the fact. The "ideal manufacturer" is fully aware of the annoyance and inconvenience to the dealer attendant upon orders for "matchings," and consequently makes it one of the chief points of his business to give no cause for complaint from his dealers so far as this branch of the business is concerned.

(2) Straw and packing charges. The "ideal manufacturer" will give this problem his most careful attention. He will keep the charges within a reasonable limit, knowing well the resentment all dealers have to paying for packages, straw, and packing. He recognises that the dealer of to-day considers the whole system of charging packages, &c., as too complex. He knows that for years the dealer has smarted under what is regarded as an imposition which adds from 5 per cent. to 10 per cent. on the cost of the goods, and is fully alive to the fact that this vexed question, tolerated hitherto, will no longer be endured and must now be swept away.

In its place he will simply have an inclusive price for all goods—with the possible exception of an extra charge for packages only, and on these he has a fixed scale of allowance for returns.

In the case of small parcels by post, he will charge bare expenses.

(3) Advance in prices as an addendum at the foot of the invoice. The "ideal manufacturer" will, immediately an advance is decided upon, rearrange his prices so as to incorporate such advance in the cost of the goods, for he is fully aware that any method tending to hinder or complicate the dealer in arriving at the true cost of the goods must at once be superseded by one more comprehensive, i.e., by inclusion.

(4) Invoices.—The "ideal manufacturer" makes it a regular practice to invoice all goods the same day as dispatched, having profited from the knowledge he has of the iniquitous method of many manufacturers who

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systematically date invoices at the end of the month, the goods following in the early days of the ensuing month. He considers such a procedure as "infra dig.," as well as annoying and an affront to any customer.

(5) Copy of goods on order.—This is one of the minor points the "ideal manufacturer" will always bear in mind. When his representative is due to call upon his customer he is careful to send a copy of all goods remaining on order. He knows the value and necessity of this, for although the dealer may know what goods have not been sent in the "ideal manufacturer" deems it his duty to send a list for comparison, and thus obviate possible mistakes—he considers it advisable, if only for the sake of accuracy.

(6) Illustrated price lists.—He takes a great pride in the excellence and accuracy of the lists he publishes from time to time, containing not only prices and detailed descriptions of all his products, but faithful pictorial representations of the more important and best selling articles—his list book of shapes is vital and important.

(7) Is personally acquainted with his dealers.—This is a most significant item in the itinerary of the "ideal manufacturer." He is not content, like so many of his rivals and contemporaries, to hold aloof from his customers. He is conversant with the special needs and requirements of the dealer, and, moreover, as head of the firm he is able to smooth over any little differences that may exist. He knows that the dealer is quick to appreciate this little act of courtesy, and the familiar knowledge he thus gains by friendly intercourse is an asset productive of real and lasting good.

To summarise, the "ideal manufacturer" keeps trace of all matchings, charges for packages only, incorporates all advances in the cost of the goods, sends a copy of goods on order, keeps his customers supplied with "ideal" lists, is personally acquainted with all his dealers.

EMPLOYMENT IN THE POTTERY AND GLASS TRADES.

THE following particulars are taken from the November issue of "The Board of Trade Labour Gazette":—POTTERY TRADES.—Employment in the pottery trades continued fairly good on the whole, showing little change compared with a month ago. Returns from firms employing 17,909 workpeople in the week ended Oct. 25 showed a decrease of 0·8 per cent. in the number employed, and of 0·7 per cent. in the amount of wages paid compared with a month ago. Compared with a year ago there was an increase of 0·6 per cent. in the number employed and of 0·3 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
China manufacture	3,252	£3,863
Earthenware manufacture ...	12,241	11,880
Other branches (including unspecified)	2,416	2,261
Total	17,909	£18,004

Districts.	Number employed.	Wages paid
Potteries	13,548	£12,944
Other districts...	4,361	5,060
Total	17,909	£18,004

Employment in the china section in the Potteries was good on the whole. It was fairly good in the earthenware section, and fair at tile works. It was good with earthenware workers in other districts.

GLASS TRADES.—Employment in these trades was fairly good, and better than a month ago. Returns from firms employing 7,646 workpeople in the week ended Oct. 25 showed an increase of 1·4 per cent. in the number of workpeople employed and of 4·9 per cent. in the amount of wages paid compared with a month ago. Compared with a year ago, there was a decrease of 3·7 per cent. in the number employed and of 3·8 per cent. in the amount of wages paid.

Branches.	Number employed.	Wages paid.
Glass bottle	5,502	£7,257
Flint glassware (not bottles) ...	1,830	2,177
Other branches...	314	361
Total	7,646	£9,795

Districts.	Number employed.	Wages pai
North of England	802	£1,051
Yorkshire	4,250	5,568
Lancashire	968	1,183
Worcestershire & Warwickshire	699	900
Scotland	616	781
Other parts of United Kingdom	311	312
Total	7,646	£9,795

Employment in Yorkshire was fair and better than a month ago in the ordinary glass bottle trade, except at Mexborough, where employment was bad; in the flint glass bottle trade it was good, and better than both a month ago and a year ago. With bottle makers at St. Helens employment was moderate; some short time was worked owing to scarcity of boy assistants. At Glasgow, Portobello and Bristol employment was good. On the Wear it was only moderate, with some short time, and was worse than a year ago. At Dublin it was bad, and worse than a month ago. Employment continued fair with sheet glass flatteners and good with sheet and plate glass workers at St. Helens. It continued good with flint glass makers and cutters at Birmingham, and in the Wordsley and Stourbridge district. Plate glass bevellers and silverers at Birmingham were still well employed. With pressed glass makers on the Tyne and Wear employment remained fair. With glass blowers in London it was bad.

United States Imports of earthenware, stoneware and china during the six months ending June 30, 1913, were valued at $4,442,000, as compared with $3,981,000 and $4,830,000 for the corresponding periods respectively of 1912 and 1911.

The "Treating" of Buyers.—One of the best jobbing houses, according to the "New York Times," recently received a letter concerning "graft" for buyers. It came from a well-known retail dry goods store in the Middle West, and said:—"We have read with interest in the New York papers reports of a recent case of giving graft to a buyer in that city. We should ask, apropos of this matter, that you notify your salesmen and department heads that we do not wish gratuities of any kind to be extended to our buyers when they are in New York. We give them expense accounts liberal enough to cover necessary expenses and a fair amount of amusement. Even in cases where business acquaintance has grown into personal friendship, we ask that no invitations or presents be given. We believe you will appreciate the justice of this request and act accordingly." Commenting on this the "Crockery and Glass Journal" remarks: "In trade opinion the firm taking this stand is to be commended. It was said that letters of this sort from other houses would soon minimise the evil."

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Buyers' Notes.

(BY A MEMBER OF OUR STAFF.)

George Jones & Sons, Ltd., china and earthenware manufacturers, Stoke-on-Trent, have won a high reputation, extending over all the principal markets of the world, for their "Crescent" productions, and in no country have their wares found greater popularity and favour than in the country of their manufacture, in which there is hardly a dealer of repute who does not stock the "Crescent" lines. Established in 1860 by Mr. George Jones, the firm has thus witnessed over half a century's trading. To record the rapid progress made by them in their early years would be a long story. We will, therefore, content ourselves by saying that by the year 1894 so much extension had been seen, and the concern had become so important, that it was deemed advisable to convert it into a limited liability company, and thus share the increasing responsibilities of management. The first chairman of directors in the limited company was Mr. F. R. Benham, who died in October, 1911, and whose position is now filled by Mr. G. H. Jones, the present directorate consisting of Messrs. G. H. Jones, C. S. Jones, G. B. Benham, A. O. Jones, and E. G. Jones. The Crescent Potteries are quite extensive, covering about four acres of land, and employing a staff of from 800 to 900 hands. They are equipped with the most up-to-date appliances in order to enable the firm to cope with a voluminous and at the same time high quality trade. Their specialities are dinner, tea, dessert and toilet sets in bone china, and all the usual domestic lines in earthenware and white granite. The writer has had more than a passing acquaintance with their productions for a number of years past, and can testify to the superiority of their wares throughout. Whilst they produce very extensive quantities of earthenware of a really capital quality, and have a wonderful variety of smart and appealing designs in earthen dinner and toilet sets, it is, I should imagine, to their china that they principally look for purposes of revenue, and there can be no doubt that their connection in this respect is a distinctly valuable one. Many royal orders have from time to time found their way to the "Crescent" Potteries, including commissions for his late Majesty King Edward when Prince of Wales, H.M. Queen Mary when Princess of Wales, the Queen of Siam, and the Crown Prince of Siam. I have heard it said many times that a china dinner service is merely a luxury of the well-to-do. It that be so, judging by the warehouses of George Jones & Sons, Ltd., this must be a very luxurious age, and the well-to-do classes are by no means a negligible quantity. But I should rather imagine that this firm is so well equipped industrially, that it is able to supply its china at a popular price, consistent with good quality, and many people can be persuaded that "Crescent" china is value for money that it will be to their interest to pay rather more than they intended, and go in for a real china service calculated to have a long life, than to purchase an earthenware one, which may possibly require replacing much earlier. Anyhow, the fact remains that George Jones & Sons, Ltd., have an enviable trade right through in their reliable china. It is very questionable whether they are not to be counted amongst the largest producing houses of china dinner services, and, as regards best china toiletware, I have certainly not seen a wider range of patterns on show anywhere than in this company's showrooms. In this china toiletware they run three shapes, which have been proven to be very popular, these being known as the "Wallace," the "King," and the "Sheffield" shapes. The designs are mainly simple and chaste, as china toiletware should be, and nothing in the way of bedroom ware for the superior home could possibly look better. We illustrate the three shapes mentioned, without describing the decorations beyond saying that they are perfectly executed, are powerfully appealing, and reflect the highest artistic talent; we will refrain from saying more, simply commending them to the notice of our readers. Much might be said about the firm's other departments, such, for instance, as china tea, breakfast and dessert ware, in which there is always a capital range of superior designs. In after-dinner coffees there is a positively wonderful selection from which to choose, and whether it be for the generally modest taste of the provincial buyer, the comparatively more expensive requirements of the West End of London, or the luxurious demands of the American multi-millionaire, the firm is quite able to adapt its efforts. George Jones & Sons, Ltd., are specially well known in Sheffield, Birmingham, and other centres of the metal industries on account of the variable lines they supply to meet the exigencies of the mounting trade, a connection which they have always done their best to foster, and by reason of consistent and sustained efforts in this direction they are now reaping a rich harvest. Finally, I will simply mention a smart new shape they have recently brought out in china dinnerware, which has been christened the "Gothic," and not inaptly. This new shape, of which a full suite of hollowware has recently been modelled, is something quite distinct from the usual running shapes, and should have a special interest for all dealers who are at all able to handle



CHOICE CHINA TOILET SETS: GEORGE JONES & SONS, LTD. [*Photo. by "The Pottery Gazette."*

CHIPPENDALE

KRYS-TOL



FACTORY:

JEFFERSON GLASS CO.,

Follansbee, West Virginia,

UNITED STATES OF AMERICA.

Manufacturers of

HIGH-GRADE GLASSWARE.

SOLE AGENT:

CHARLES J. PRATT

for United Kingdom and Colonies,

(NATIONAL GLASS CO.),

1, Charterhouse Street, Holborn Circus,

LONDON, E.C.

WRITE FOR NEW CATALOGUE AND PRICE LIST.

china dinnerware. The new shape can now be seen at George Jones & Sons' London showrooms, 21, Bartlett's-buildings, E.C., where Mr. A. O. Jones is in attendance.

Wood & Sons, Ltd., Trent and New Wharf Potteries, Burslem, are earthenware manufacturers who are well known in a variety of markets. They have many series of productions which are well worthy of being called attention to in these notes, but it should be specially mentioned that they have made an important point of reproducing many of the patterns of their famed forerunner, Enoch Wood. They are particularly noted for the brilliancy and the quality of their blues, which play an important part in a large number of their admirable patterns. Their new designs are mainly based on historic types, both early English and Oriental. Of the latter, their version of the prunus decoration has met with wide appreciation. From the many Chinese treatments of the prunus flower, Wood & Sons, Ltd., have adapted the one produced under the Tching-Ho period of the Ta Ming dynasty, from 1465 to 1488. The "Kylin" or "Dragon" design is also of the same period. These designs are applied not only to a wide range of vases, but also to bulb and salad bowls, flower tubes, pot-pourri jars, and useful table fancies of every description. Other decorations are the "Orion" and the "Elers" ware. Both these decorations are unique on account of the treatment and material, as well as the character of the design. The "Orion" ware is carried out in a range of coloured dips, with the pattern printed and enamelled in suitable colours. The "Elers" ware is decorated entirely in coloured clays, with raised ornamentation done by hand. Both are popular lines at reasonable prices, and, being Sound in design and harmonious in colour, are admirably adapted for household decoration. In dinner, toilet, breakfast, tea and dessert wares, the shapes of Wood & Sons, Ltd., are really too numerous to particularise with any degree of safety, whilst every kind of pattern is shown from the daintiest bands and the most delicate festoons to the richest and most lavish Japans. Special mention may, however, be made of their new "Georgian" toiletware in the Enoch Wood shape. This is a reproduction in Spode and powder blues of an old eighteenth century shape and pattern. Among the dinner patterns the "Venice," "Torbrex," "Delft," "Watteau," "Windsor Border," "Adams" and "Cambridge" are a few of their most popular designs. In the higher region of ceramics, Wood & Sons' revival of the well-known Pâte-sur-Pâte decorations demand particular notice here. Sufficient to interest the dealer historically and technically in regard to this old-world process is contained in a capital little brochure recently issued by the firm, containing just four beautifully executed lithographs, and not more than a hundred lines of descriptive text, embodying a few thoughts on the legitimate application of decoration to ceramic products. We heartily recommend anyone who has not seen this admirable little booklet to apply for a copy at once. It describes succinctly how the process of Pâte-sur-Pâte—the superimposition of a white or coloured clay upon a ground of another colour—was employed by the Chinese as far back as the Ming dynasty of 1355 to 1444, how it was revived by M. Fishback at Sèvres about 1850, and perpetuated by MM. Solon and Gélée. Mr. F. A. Rhead, Wood & Sons' designer, is naturally specially interested in this particular process, having been a student of M. Solon at Minton's. It will, therefore, probably not be surprising to our readers to learn that Wood & Sons, Ltd., are producing over thirty decorations by means of this delicate process, in every conceivable colour scheme, and all adapted to each of their numerous shapes. Most of these decorations are enriched with scoured gold. The designs are all by Mr. F. Rhead, and are carried out by a trained staff under his supervision. Although many of these decorations are intricate and laborious in execution, the prices are within the capacity of the ordinary purse, and are, in fact, very cheap in comparison with other ceramic types requiring the same artistic effort. Besides this, Wood & Sons' Pâte-sur-Pâte is absolutely unique in conception, and in its general result. Wood & Sons' exhibit at the Ghent Exhibition attracted general attention, and was awarded the Diploma of Honour. Finally, it should be said that the firm have markets in every portion of the globe, with agents in every continent and colony, and consequently and of necessity have the widest range of shapes and decorations to suit these different markets. As it is extremely difficult by a simple photographic process to convey an idea of the charms of the delicate effects obtained in Pâte-sur-Pâte, we have decided to illustrate a few useful domestic pieces with inexpensive designs of definite merit, which every dealer is able to market, and which will at least go to show what a varied range is covered by Wood & Sons, Ltd., in the scope of their operations. The firm is represented in London by Mr. H. Brittain, at 22, Ely-place, Holborn Circus, E.C., who has some good new lines on show.



USEFUL GOODS OF WOOD & SONS, LTD.

The Blyth Porcelain Co., Ltd., Longton, are manufacturers of a very popular type of china, with which they have succeeded in building up an excellent trade in tea, breakfast and suite ware. In this direction they have always been specially interested, and the result of their specialisa-

tion is that to-day not only throughout the British Isles do their sets meet with a lively apprcciation, but they enjoy an enviable popularity overseas, especially in Canada, Australia, South Africa, and the British Colonies generally. This is not at all surprising, for the body is a thoroughly sound and reliable one, whilst the glaze which has been selected is in close agreement with it, and is not likely to play pranks in the way of crazing or discolouration. For English bone china of a really reliable type, and at a price within the limits of a middle class purse the Blyth Porcelain Co.'s "Diamond" china is to be recommended. Mr. Victor Forester is always on the alert at the factory to ensure the accepted high standard being continuously maintained, and as for the industrial conditions of the factory, from what the writer has personally seen, he is inclined to believe that not only will they bear the strictest investigation of the Government officials, but they might well be emulated by other factories in mind. The firm is certainly exceptionally well laid out to produce china in bulk, and economically; the machinery is of the most approved type, and the workers of tried ability, and that the firm have made the most of these happy conditions is beyond question. I should not be doing the correct thing, however, were I to create the impression in these notes that they are open to accept all kinds of orders for decorative lines in time for Christmas delivery, for, as a matter of fact, when I called at the works some weeks ago, they were already booked up with orders for "Diamond" china well up to the end of 1913. They have, of course, always fairly large stocks in white of staples such as "Minton," "Worcester," "Silver," "Paris," and similar standard shapes in tea and breakfast ware, which can be finished off with simple lining, edging and spraying treatments in double quick time, but it should be noted that latterly the firm has gone in more energetically for services of a more ornate type of art, though they have in no way "turned down" their useful staples and bulk lines to achieve success in, shall we say, a more interesting field? The last year has certainly witnessed a marked change in the quality of the Blyth Porcelain Co.'s designs, and the dealers have already recognised the force of the movement, and have already placed orders confidently and without reserve for the more elaborate ornamentations, running into sovereigns per service. The firm have always made special claims for their mazarine blue; naturally, therefore, this colour figures prominently in many of the more elaborate designs they are now producing. A walk through their extensive workshops and warehouses confirms what has already been said in regard to their more recent activities. On every side the better class ornamentations are to be seen; the shapes are all up-to-date, and the designs well worth the price asked, the colour combinations in many cases being peculiarly good. In the modern movement, special consideration has been devoted by the firm to groundlaid designs, and many pretty effects are the outcome of this treatment. Their ivory groundlaid decorations have a specially delicate appearance. There is also a ¼ in. gold band and black key pattern, which has proved quite a favourite. We illustrate four teas and saucers, all of which are likely to become increasingly popular. These are:—(1) The "Devon" shape, No. 5999 decoration, with the gold band and black key design already alluded to; (2) the "Trent" shape No. 5974 decoration, which has a treatment of oven blue and best gold inside and out; (3) the "Scotch" shape, No. 5887 decoration, which has an oven blue border in combination with coloured roses, and is picked in with best gold; and (4) the "Kelvin" shape, No. 5974 decoration, ivory ground laid, with assorted fruit designs which are outlined in best gold on raised paste. The whole of the designs are nicely executed, and they should, as they become better known, find increasing favour. The firm are represented in London by Mr. R. Hartland, 117, Holborn, E.C., and their provincial representative is Mr. W. Warburton.

The Arnhem Pottery Co., of Arnhem, are represented in London by Mr. F. Findlay, in Gamage-buildings 118-122, Holborn Circus, E.C., where quite a pleasing selection of their unique wares can be seen set out to the best advantage, for the show rooms are exceedingly well appointed, and do the agent credit. From the first moment the writer was brought into contact with the Dutch art pottery generally he was particularly struck with the disparity between English and Dutch decorative



NEW TEACUPS OF THE BLYTH PORCELAIN CO., LTD. [*Photo. by "The Pottery Gazette."*

treatments. Since then, having had the opportunity of witnessing the work of the Dutch potter on his native soil, and in the observance of his usual routine, I have often reflected upon the vigour and the potent individuality which ever seems to be translated into his work in all its stages. Whether it be considered from the aspect of form or design, Dutch art pottery of to-day seems to be synonymous with spirit and confidence, and this seems to hold equally true whether his work is intended for England, America, or any other market. The Dutch potter is evidently no respecter of persons, and does not allow his commercial zeal to override his native interpretation of what art should be. The canons of his art are presumably his first principles; these observed, should success favour his efforts all well and good, if not it cannot be helped. Compromise would appear to be out of the question. There is something about the samples of Dutch art ware in Mr. Findlay's rooms which impels admiration in spite of their quaintness, and if they are not just as popularly received as they deserve to be, it is only, to my mind, because they are a little too early timed, for there is every indication that the conservatism of the English taste for that which is quiet and unostentatious is gradually being invaded, and we are likely to become increasingly interested in a more sportive type of design. Other things being equal, in proportion as this movement gains ground will the Dutch art pottery meet with increasing recognition. Probably a decade or so

hence, when we have learned to be a little more confident of ourselves, we shall better understand the courage and fearlessness of the Dutch potter; until then he must rest content with the patronage of those who, unfettered by local or national customs, usages, and fashions, can appreciate art with such a width of outlook as does not stop to investigate its birthplace. To such a mind the intrinsic merits of the modern Dutch art wares do and must necessarily appeal. Putting aside meditation and coming down to practical issues, Mr. Findlay is at the present time showing a capital range of the productions of the Arnhem Pottery Co., Ltd., in a variety of useful and ornamental articles. There is a multiplicity of lines, the bias of which is perhaps in favour of ornamentals. Vases of all sorts of novel shapes in a wide range of sizes and with very variable types of designs are a feature of the display, and he who could not find something of special interest included therein would be a very squeamish individual indeed. The few pieces chosen by the writer for illustration are in a sense typical of the majority of lines one may expect to see in the show room under notice. commendable. Finally, I ought to state that there is a very attractive line in afternoon tea sets on wicker trays, in which a number of types of decorations can be had, whilst another very good line appears to be in the direction of clock sets, consisting of clock and case, and two side vases or candlesticks. Mr. Findlay's show rooms at this particular period of the year are specially worthy of a visit, and are sure to provide the average dealer with some very suitable material for enlivening his general display, and particularly his window.

Mr. Thomas Poole, Cobden Works, Longton, has been established for so long as a manufacturer of china tea ware, and has become so well known throughout the whole of the trade in the course of half a century's "potting," that it is almost superfluous for me to attempt to introduce him by the remark that his forte is in neat and dainty patterns on a good body at a popular price. A visit which I recently paid to the Cobden Works was sufficient to persuade me that the proprietor is not by any means resting upon the results of past labours, but that he is, on the contrary, working hard to keep the trade well



TYPICAL EXAMPLES OF ARNHEM POTTERY. [*Photo. by "The Pottery Gazette."*

The decorations are practically all freehand, and individuality of treatment is perhaps their truest description. The largest piece in our illustration has an iris design which is powerfully handled in strong and vigorous colours; the ground-coloured vase is well treated in green, and has a multi-coloured mosaic type of ornamentation, which looks extremely well; another of the pieces is reminiscent of the old Delft pottery, and consequently finds special favour in all quarters; and the Japan bottle has a conventional design, which, however, is treated in characteristic Dutch style. The way in which the Dutch artist is able to evolve from a central subject such as a flower, a butterfly, or a beetle, a design which is capable of covering any size of surface, amplifying here and there to fit in with his artistic inclinations is really quite remarkable, and when one remembers that it is all art of a distinctly commercial type, one is bound to accede that it is really clever. An item which interested me keenly was a large vase decorated with a pair of storks, the general balance of which appeared to be particularly served with "Royal Stafford" china in new and attractive designs in tea sets and auxiliary articles, which shall be moderately priced and the same time artistic. He has a wonderful variety to offer in the direction of both shape and design. In the range which he is able to present from the well-known simple plain shapes, such as the "French," "Silver," "Globe," "Minton," "Paris," and "Worcester," to the more embellished, such as the "Lynton," "Daisy," "Paragon," "Trentham" and "Oban," there is ample scope as regards form, whilst there is adapted to these and many other shapes, too numerous to mention here, a bewildering variety of designs, in all of which the idea of popularity of demand is never lost sight of. Mr. Poole is always keen on producing lines which every bona-fide china dealer can, if he will, keep in stock; he is not interested in that class of tea set which is not calculated to sell readily, and it is with this popular class of service that the Cobden Works, with their numerous employees, are kept constantly on the hum. It is essentially as a tea ware manufacturer

that Mr. Thomas Poole appeals to the trade, and because of this we chose for illustration two teas and saucers, of the plain "Richelieu" and fancy "Paragon" shapes, the former having a background of mazarine blue with floral panels and a gilt edge, and the latter being treated in fawn with an intricate lithograph border added. Both of these designs are well executed, and should have a good run, and at least they may be counted amongst the newest productions of the Cobden Works. It may seem somewhat unique to include in our illustration a couple of china vases, but the writer was quickly impressed by these on entering Mr. Poole's showroom, and, recognising that it was something of an innovation in "Royal Stafford" china, asked to be allowed to illustrate them. One of the pieces, both of which are delicately potted, has a mazarine blue and gold neck and foot with a floral design in the intervening space, and the other is dealt with in pink, relieved by a spray pattern and finished with solid gold handles. They would seem to be specially suitable for light drawing-room furnishings, and, when treated, as they are and deserve to be, in best burnished gold, they should be assured of a successful run. In stock lines of tea ware such as plain gold edge, gold lines, edge line and sprig, colour edge and handle, and ¼ in. colour bands, and gold edge and finishing line, Mr. Poole is always



RECENT PRODUCTIONS OF MR. THOS. POOLE. [*Photo. by "The Pottery Gazette."*

there, and it may interest some of our readers to know that the "Royal Stafford" china is accepted by the Home Office officials as being "leadless." Both in the home and overseas markets he has a wide clientèle which assures plenty of work all the time for the Cobden factory. Mr. Raymond Poole periodically visits the metropolis, and will be there again early in January with new season's samples; Mr. G. Sheal, of 25, Gordon-street, Glasgow, covers the whole of Scotland and Ireland, and Mr. H. W. Antill the South Midlands and West of England.

Earthenware and Pottery, of common varieties, to the weight of nearly 100,000 metric tons, was imported into France during the first nine months of 1913. The figures show a notable recovery.

The Pottery Trade of Poland.—A British Consular Report just published states that floor tiles are more extensively employed, and the market was under-supplied. The import was slightly larger, but as prices are always regulated so as to undersell the foreign-made article, the price of which is considerably increased by a heavy duty, there is little opening for British manufactures in this line. Sanitary ware is, however, largely imported from the United Kingdom.

CLAY PITS OF OLD GLASGOW.

A LECTURE was recently given in the Glasgow People's Palace on the above subject under the auspices of the Natural History Section. The lecturer was Mr. J. Arnold Fleming, F.R.S.E., of the Britannia Pottery. Mr. Fleming pointed out that students of nature could not be long so without observing the effects of the soil in the growth of vegetation or the habitation of animals and insects. Nature in its wonderful power for providing use for everything had given clay for man's use, for making cooking utensils and vessels to contain food.

Man, in the earliest known races, carved clay vessels of a rude character, pictures of beasts, birds and implements, with an artistic interest and decorative instinct. Man was not long on the world's stage when he commenced to work clay and to adorn it with all his primitive ideas. Clay gave us, therefore, the history of man. In Scotland we had the Celtic incense burners and cinerary urns, some of which are not only beautifully made but carved with various patterns such as the "herring-bone," zig-zag, &c. At first the early Scottish race baked their pottery in the heat of the sun, but as man required more durable articles fire was added to the process of hardening.

Round Glasgow we had two clay fields. The larger one Mount Blue claybed, and the other, much smaller, the Shawfield bed. The Mount Blue bed stretches from the Tollcross sand pits to the Cross of Glasgow. It at one time was the Gallow's Muir, as it was so bleak and desolate, without any vegetation. The present street of Gallowgate runs right through it. The lecturer described how geologically it had been formed, first the sand or coarser particles at Tollcross, and then the finer particles on the Mount Blue bed. It was chiefly used for making red pottery and bricks. The early brickworks of Glasgow were erected not far from the present centre of the city and were owned by a John Anderson, who leased five acres from the University. The industry flourished with the rapid increase in the wealth and growth of the city. But in 1780 Government put a tax on bricks of 3s. per 1,000, which made bricks dearer than stone. If this tax had not been put on there is no doubt Glasgow would have been a brick-built city, but sandstone was found to be cheaper, and took its place. At one time there were seven potteries making teapots, jars, &c., as well as bricks and tiles from the Mount Blue clay. During recent excavations some fine specimens of these jars were discovered, and are now in this museum.

A hearty vote of thanks was accorded the lecturer by Councillor Dr. Gemmell, who occupied the chair.

SOME CHINA SHOPS IN HAMPSHIRE AND DORSET.

(By a "Pottery Gazette" Special Commissioner.)

ALREADY, during the present year, it has been my privilege to place on record an account of a journey which I made to Devonshire, principally in order to report upon the progress of the retail side of the trades which are represented by The Pottery Gazette, and, in the hope of preserving something like continuity, I have, during the last few weeks, paid a further visit to Hampshire and Dorset. It was really in my programme and was my intention to work back from Bournemouth in a westward direction, and thus connect up, somewhere in the region of Exmouth, with the ground previously covered. I must, however, have seriously underrated what my task entailed, and it is, perhaps, well that I should explain here that, in the end, I found it necessary to leave over that portion of the coast from Exmouth to Portland, and, incidentally, also a number of inland towns within a reasonable distance thereof, some of which I know boast of fairly important businesses in china, earthenware and glass. However, possibly I shall be able to pass through these places on some occasion in the not far distant future, when I can do them justice.

It may, perhaps, be thought that there is something more than merely accidental in choosing the South of England for a journey of this sort: there is. But the fact that in making such a trip one is enabled to get for a few days within the influence of a somewhat more salubrious climate is not, as may be supposed, the determining factor; it is merely a happy contingency. One has, first of all, to recognise that some of the resorts on our southern coast have witnessed an inordinate growth in population and general importance within the last few decades, and this has brought about new conditions which have had an important bearing upon the trades we represent. For a concrete illustration of this, one can perhaps not do better than cite that beautiful modern town in the western extremity of Hampshire,

BOURNEMOUTH.

Fifty years ago—that seems quite a long span to some of the younger generation like myself, but it is well within the memory of many of those members of our trades upon whom I recently called—Bournemouth was little more than a pretty village. The fathers of some of the present proprietors of china and glass shops in the small adjacent towns could, I understand, well remember the time when, as a matter of fact, only two houses existed in Bournemouth. To-day there is a population of 79,000. It is, for one thing, a town which one can safely say is distinguished by the charm of its position, situated, as it is, in the centre of a pine forest, on a magnificent bay, and in proximity to an abundance of natural cliff. It has a beach recognised as one of the finest in Great Britain; the climate is equable, the sanitary conditions are perfect, and every modern improvement has been effected by a progressive Town Council, apparently with a disdainful disregard of expense. Is it to be wondered at, therefore, that its popularity should have grown so phenomenally, and, after this introduction, will it cause surprise to know that I, at least, regard the shopping facilities of Bournemouth, speaking in a general way, as equal to those of any town I know outside of London? One feels it to be a special duty to refer to the elegantly designed parades, or arcades, which are distributed over the various sections of the town. These appear to be well visited by the shopping fraternity (I think sisterhood would perhaps be more correct), and, in this respect, they form a marked contrast to some of the arcades which one might instance in certain Midland towns, Derby, to wit—where the arcade is considered more in the light of a relic of history than as a feature of usefulness. Although wide in its extent, Bournemouth has capital facilities, and one need never be at a loss in getting from place to place within its boundaries. There is an excellent service of electric cars, commencing at Christchurch, and passing through Boscombe, Bournemouth and Westbourne to the County Gates on the Dorset boundary, thence to Poole. Taking advantage of one of the cars of this service, I betook myself first of all to that picturesque ward of the town standing upon the East Cliff, known as Boscombe. Although essentially an integral part of Bournemouth, being not more than ten minutes' ride from the Central Station, Boscombe might be regarded as a resort of itself, for it has its own railway station and pier, a capital arcade, a fine theatre, enviable sands, and unlimited facilities in the way of greens and lawns for outdoor sports, whilst steamers call at its pier every day.

It was in such a district that I was able to make my first call, that being at the shop of

Mr. Stanley Tye, The Broadway, Boscombe. It is nearly seven years ago since the china shops of this part of the country were reported upon for The Pottery Gazette, and at that time Mr. Tye's establishment was non-existent, as it is actually only two years since the business here was opened out. However, everybody in the trade knows the name of Tye & Sons, Northampton, and, to cut a long story short, Mr. Stanley Tye is a son of Mr. Edmund Tye, of that town, who, some few years ago, was ordered by his physician to seek the healing virtues of Bournemouth. I was pleased to see that Mr. Tye, sen., is still active and jovial, and looks good for a long time yet. The only connection between the two concerns mentioned is that whilst the Northampton business belongs to the father, the Boscombe business belongs to the son, or rather I should use the plural, because the younger son, Mr. Eric Tye, also devotes his whole time to the concern. I was extremely fortunate in finding both the father and the sons on the premises when I called, and, upon making my business known, I was cordially received. Mr. Tye, sen., who is a very old subscriber to The Pottery Gazette, was kind enough to give me a much valued word of encouragement and appreciation, recognising that we are all the time trying to make the Journal more valuable to every section of the trades we represent. I, on my part, was pleased to be able to congratulate Mr. Tye upon the extremely smart shop which he has assisted his sons to establish at Boscombe, for the business is undoubtedly of a really high order, and it is at once apparent that Mr. Tye has not set himself out to compete with the more popular type of trade done at the shops nearest him on either side, although, by the way, one of them is nearly a couple of miles away. It is not egotism on his part to describe the shop, as I noticed in one place it is styled "Tye's China Treasure House," for there were some real gems to be inspected within.

But I am getting along just a trifle too fast. I ought, first of all, to mention that the premises are situated in the main thoroughfare, and were built specially to meet the proprietor's wishes. They are located almost opposite the important Boscombe Arcade, in the region of which a considerable amount of shopping is done, and in which high-class musical concerts are frequently held. The new shop is long and narrow. The building, all ground floor from the front window to the back door, is at least 80 ft. in length, and is divided into three portions; the main sales room, which accounts for fully 50 ft., behind

which is the office—comfortably appointed—and further on is the packing room. By the courtesy of Mr. Tye I am able to reproduce a photograph of the interior, which will, perhaps give a better idea as to what the place looks like.

I was much struck with the well-trimmed appearance of the interior. At first, I concluded that the floor had been covered with a bright red cork lino., but I discovered afterwards that it was a patent cement-like flooring, known as "Doloment," which has every appearance of a linoleum, and can be cleaned and polished without difficulty. This, without doubt, had much to do with the general bright internal appearance of the premises.

As regards the general display of the goods, I cannot overpraise the work of the young brothers, for Mr. Stanley Tye, the elder of them, is still quite a young man. Everything was thoroughly straight and orderly; in fact, I was asked by Mr. Tye, sen., if I did not consider it looked too prim. I hardly think, however, that in a business of the calibre which this one is intended to be, anything else than method and tidiness would be likely to have the desired result. I will not attempt to describe the contents of that admirable showcase which our illustration depicts in the middle of the room to the left hand, for, to do so, would, I am afraid, be to court disaster. I will only say, therefore, that choicer pieces of ceramics than this case contained one could not wish to possess.



INTERIOR OF MR. S. TYE'S NEW SHOP AT BOSCOMBE.

A word or two as to the windows. The actual front window is not by any means a large one, but in the doorway there is a side window extending back some 8 ft., and the two windows in combination make possible a very worthy exhibit. Considerable attention is devoted to the arrangement of these windows, and I must say that the way in which the plate-glass shelves are draped with delicately tinted silk dressings for the reception of such high quality ornamentals as Royal Crown Derby, Worcester, Doulton, Copeland, Coalport, Minton, Wedgwood, and others of the best makers, was really charming. Rarely a day passes but some particular shelf or window is rearranged in order to hold the constant attention of the residents. This policy would seem to be akin in its final results to a sort of "Watch this space" advertisement.

I should not be allowed the space here to speak at length of the extremely pleasant half-hour I had with Mr. Tye, sen., in the office inspecting his valuable collection of prehistoric skulls, bones, and implements of warfare, for he is a man of hobbies, and his sons follow his lead. I shall certainly retain pleasant recollections of the visit for some time to come.

Finally, I would simply point out that Mr. Stanley Tye has echoed his father's attitude in regard to keeping his business movements well before the general public. He is constantly issuing smartly designed illustrated cards and leaflets, all of which are tending to engrave the name of Tye for china indelibly in the minds of the populace. One thing is always to be seen in advertising matter which emanates from Tye's, whether at Northampton or Boscombe, and that is the phrase, "Where the wedding presents come from," which has the effect of bringing in many inquiries for wedding presents, which, in all probability, would be unheard of otherwise.

I could write for quite a long time on Mr. Stanley Tye's new venture, but I have visions of the Editor's blue chalk, so I will "move on."

A hint which I received whilst in Boscombe led me to call at the establishment of

HAWLEY'S, 177A, Christchurch-road, who describe themselves particularly as "dealers in fine old Chinese and English china," and, although not possessing a china business in the trade sense of the word, I would place my call there upon record, for obvious reasons. Firstly, and principally, many readers of THE POTTERY GAZETTE may recognise in the mention of the name an echo of that business previously carried on at 96, Fargate, Sheffield. Hawley's, of Boscombe, is, in reality, an evolved form of Hawley's, late of Sheffield, Mr. John George Hawley and his sister, Elizabeth Hawley, both of whom enjoy a semi-retired position, being interested in the new business. During the many years they were resident in Sheffield they were always interested to a degree in antiques, the inspiration probably having come to them from their father, who himself was a china and earthenware dealer in High-street, Sheffield, many years ago. I felt it due to Mr. Hawley that I should call upon him, and I was very much interested in being shown some of his many relics of defunct and perpetuated ceramic concerns. Amongst those I noticed were an old Rockingham apple green breakfast service with hand-painted landscapes, in excellent condition; a rare old Rockingham plate in apple green, which was said to have been made specially for the approval of the Marquis of Rockingham; some Chinese pieces of the K'ang-hsi period, with the sacred stag and storks; an early Swansea font of a blue smeared glaze, the bowl of which is supported by three dolphins; a number of original Spode pieces, design No. 3,139, marked in red, the design being a mazarine blue and gold rim, with a leafage white embossed relief, and choicely hand-painted floral groups in the centre, the workmanship being perfection itself; and a large Rockingham handled basket, one of the biggest and finest pieces of its kind which I have ever seen, treated in apple green and bearing a fine painting of Warwick Castle. Some months ago they purchased and disposed of an original Rockingham plate, from which—it is said to be definitely traced—King William IV. ordered a complete service. It is really unfair of me to select

these few pieces specially out of the host of excellent things in the shop, some of which, perhaps, may be of greater interest from the point of view of the connoisseur, but I merely do so just to convey a general impression as to the quality of antique in which Hawley's specialise. Mr. Hawley was very pleased indeed to see me, and my visit reminded him of many incidents of his earlier life, some of which he related, spent in a brisker and more popular type of china business. He expressed the hope that the modern china trade was keeping lively, and in response to inquiries which I made in regard to the antique side, he replied that he had no cause to grumble. Of course it was a much slower trade, but it was questionable whether it was not just as profitable. I ventured the sly remark that it was just possible that it might be more so.

CHRISTCHURCH.

It may almost be said that any road at the eastern end of the Borough of Bournemouth leads to Christchurch. Personally, in order to get there, I availed myself of one of the Corporation tram cars, passing along Christchurch-road, through the business districts of Boscombe and Pokesdown, thence through the residential district of West Southbourne, and over the handsome iron Tuckton toll bridge, right into Christchurch High-street, a five miles' run, in the course of which one passes ever and anon between the invigorating pines. Christchurch has indeed a historic past. The earliest authentic record we have of it dates back to its occupation in the year 901 by Ethelwald, when retiring before his kinsman, Edward the Elder. Since the days of the Plantagenets the place has borne the name of Christchurch, in consequence of the dedication of its Priory. In the reign of Edward I. the town was of sufficient importance to send two members to Parliament; to-day it is a small, modern borough, having a population of between 4,000 and 5,000, the centre of agriculture and fishing, but possessing no other industry. The town is lighted by electricity, and is governed by a progressive little municipal council, which has recently installed an efficient drainage system, and created a charming river-side walk, from which fine views are obtained of the ancient castle ruins, and the magnificent Priory Church—one of the architectural glories of England. The Rivers Stour and Avon, and the extensive though shallow harbour, offer splendid facilities for boating, and the annual regatta is a very popular event. The church has much to offer of historic interest, and especially attractive is its Norman architecture—the work of Ralph Flambard, the evil genius of William Rufus, and the builder of Durham Cathedral—the character of much of which has been absolutely preserved in its original condition. The attraction of the Priory Church may perhaps best be gauged by the fact that over 40,000 people pay to inspect it every year, and the Christchurch ratepayer benefits in a very direct way thereby.

In the centre of the most important street of Christchurch I was attracted by a smart-looking corner shop with an imposing frontage, which I could see at once was the principal—in fact, the only bonâ-fide china shop of the town—and I am pleased to be able to reproduce a good photograph of it, which will save me a lot of effort in trying to describe it. I refer to the business known as

Froud's, The Central China Stores, 43, High-street. This business, as I understand, is supposed to have been commenced about the year 1820, since when it has always been concerned with china and earthenware, though Mr. Froud, who has been connected with a gentlemen's outfitting business in the town for some thirty years, and whose brothers have also businesses in the town, has only had possession of it since 1910, when it fell into his hands on account of the ill-health of some ladies who at that time owned it. Since his occupation of the premises Mr. Froud has literally turned it inside out. He has spent a considerable sum in renovation, especially in regard to a new frontage, floors, and ceilings, and, in fact, must have spent hundreds of pounds in the conversion of some very old premises into a smart and up-to-date shop. Although I was unfortunate upon making my first call, I was subsequently pleased to be able to meet Mr. Froud, and found him, as I expected, to be an enterprising sort of gentleman, who, though he knew little or nothing of the china business at the time of taking it over, has, practically, been able to quite double the business that was at that time transacted. The shop is carefully tended under his superintendence by a couple of young ladies, and the stock is cleanly kept and temptingly presented. The windows were smartly arranged, and, although the business is essentially concerned—as any Christchurch business must be—with a medium quality of product, it is thoroughly worthy of the town. Mr. Froud is the recognised agent for the Goss



Mr. Froud's China Stores, Christchurch.

crest china, and naturally, during the season, he does a very good business in the direction of souvenirs and presents. A speciality which I observed on show was in the shape of a Goss model of the Norman Tower of the Priory, with descriptive notes. There was a charming selection of both fancy and useful domestic lines, amongst which were to be noticed Wedgwood, Doulton, Foley, Bretby, and "Silicon." Although this was the first time I have ever been in Christchurch, I am assured by a colleague, who has seen the photograph here reproduced, that the business has really undergone a process of veritable transformation since he, a few years ago, visited the place and passed the shop. We very naturally wish Mr. Froud every success in his new venture, to which we have much pleasure in calling attention in the course of our present tour.

During an interval which I found necessary if I was to get an interview with the proprietor of the business previously referred to, I sauntered up to the Priory, almost

directly outside the gates of which I observed an old-fashioned type of building—an old inn, as a matter of fact—known at one time as Ye Olde Eight Bells, occupied by an exhibition of Arts and Crafts. It was designated "THE CHRISTCHURCH ART WORKERS' GUILD," and my attention became fixed upon a smart, if small, collection of the lustrous Ruskin productions of Mr. W. Howson Taylor, of West Smethwick. I needed no invitation to walk inside, especially as I noticed the exhibition was free. Making the acquaintance of the proprietor, Mr. Edward Eyres, he kindly gave me a few particulars of his venture, and allowed me to examine the whole of the exhibits. I may explain that the guild is formed to assist artists and craftsmen by enabling them to exhibit in a permanent exhibition examples of their work. I am pleased to learn that the general public has commendably responded to this effort to bring them into touch with really good and artistic work. Many of the exhibits which I examined were specially suitable for wedding and other presents, and any of them could be purchased. The exhibition included pictures, etchings, bas reliefs, wood carving, embossed leather work, metal work, jewellery, basket work, and, principally, so far as we are concerned, Ruskin ware and some Icenian leadless glaze pottery, the latter being from the Garden City of Letchworth. It was quite an interesting diversion from the regular routine of my tour, and I record it with a certain amount of pleasure, although it may have only an indirect interest to my readers.



EXTERIOR OF MR. J. T. GODWIN'S SHOP AT DORCHESTER.

This was about all there was of special interest to me as a trade commissioner in Christchurch, and I decided to go on from thence to Dorchester, leaving Poole, Wimborne, and Bournemouth proper to be covered on my return journey. I mention this because it must be remembered that there are quite a number of very important china businesses, especially in Bournemouth, to which I am hoping to revert in a future issue.

DORCHESTER.

A railway journey of some thirty miles taken the following morning brought me to the ancient town of Dorchester, and I was soon within that old-established business of Mr. J. T. Godwin, High-street, a bonny china business indeed. It dates back quite a long way in the history of the town, although it has not always been located at the same spot. Somewhere in the region of the present County Hall Mr. Godwin's grandfather opened out as a china and earthenware dealer many, many years ago, and it is quite 40 or 50 years since the present proprietor's father, who died some 17 years ago, moved into the present buildings. His son, Mr. J. T. Godwin, the second, has enthusiastically taken up the work of his ancestors, and can boast of one of the smartest businesses, not only in the county of Dorset, but in the whole of the south of England. The shop covers extensive ground; is double-fronted, as will be seen from our photograph of the exterior, here reproduced; occupies a corner situation of some eminence, and is in every way capitally appointed for the conduct of such a business as the one for which it is used. Mr. Godwin courtcously received me, and gave up to me a considerable amount of his valuable time. I was favoured, as I not unusually am, to be shown right through the premises from cellar to attic, as it were. With the front interior of the shop I was much impressed, for, within the last few years, the proprietor has made some capital improvements in the direction of stained oak panelling, fixturing and shelving, which imparts an impression of solidity and importance worthy of the ceramic art which adorns it. It is not necessary to say much about the window display, which was in every way admirably carried out. I can at least mention that it contained a representation of everything that is of the best, and included, moreover, lines of the most recent introduction by many of the principal firms, some of which, despite my efforts to keep au courant, I have not yet had the pleasure of seeing on show, even in the London stores. I do not suggest that such lines are not there, but I certainly did come to the conclusion that Mr. Godwin has succeeded in getting them as soon as ever they are issued from the factory. As an illustration, I will simply cite a line of Chinese reproductions by S. Hancock & Sons, Stoke-on-Trent, inspired by the porcelain of the Yung Cheng period, 1723 to 1735, the design being a rockery and Chinese pheasant. I might mention others, but one illustration will no doubt suffice. At the back of the shop there are steps leading up to a beautifully appointed show room. Our second photograph illustrates this. At one time this large show room was divided into four small rooms, but when Mr. Godwin, sen., bought the premises many alterations were made, and this was one of the most important and useful. There is no necessity for me to call attention to the beautiful three-tier case in the centre of the room; all encased and dustproof. What an amount of labour must be saved by this installation, and how much more effectively and imposingly can the goods be displayed. Its contents thoroughly befit its surroundings, which is quite conceivable, when one remembers that Mr. Godwin has all the principal agencies. The larger wares, such as toiletware, are distributed round the room on the floor, and the whole arrangement is orderly in the extreme. There are many good lines in English cut glass, in which I am given to understand there is a revival of interest just now, necessitating quite a display of it in the front windows. There were some smart lines in Bretby "Cloisonné" wares, and the range of tea and dinner services at all prices was very encouraging. There was a splendid assortment of white china of all makes, both plain and fancy; and in the latter the white leafage wares, emulating the "Savoy," and other vegetable varieties, the introduction, I believe, originally of W. T. Copeland & Sons, and associated with their statuary department, were prominently displayed. At the back of the show room are large warehouses, and in

the course of an inspection of these there was little in the region of pottery that I was unable to find, right from the very prosaic terra cotta gardener's flower pot from Bulwell, to the most elaborate and artistic art production. It would be extremely difficult to give a true impression of the extent of these warehouses, were it not for the fact that I am able to say that history has it that the buildings in question once constituted the old Dorchester theatre, and the whole of it is occupied by Mr. Godwin's present business. In bold painted lettering on the side of the building I noticed the advertisement, "Godwin's for glass and china," and before I left I recognised that it was conscionably true. It is almost unnecessary to add that, having the chief shop of the place, Mr. Godwin holds the Goss agency, and he stocks the Dorchester, Weymouth, and Dorset county arms wares, as well as views of Cerne Abbey, a place of historic interest some eight miles away. In these days of motoring, the provincial dealers suffer a good deal by reason of people simply getting into their cars and preferring to do much of their shopping "in town," but I can assure whoever may chance to see these notes that the facilities which Mr. Godwin offers, and the prices which he has in force, will not warrant taking such a course. I take the opportunity of heartily congratulating him upon the all-round excellence of his business.



DORCHESTER SHOWROOM OF MR. J. T. GODWIN.



WEYMOUTH SHOWROOM OF MR. J. T. GODWIN.

WEYMOUTH.

In the select resort of Weymouth, not many miles beyond Dorchester, practically the only china shop is a sister business of Mr. Godwin's establishment at the former place. It is conducted under the same name, and is situated at 72, St. Mary's - street. This business was bought by Mr. Godwin's father from a Mrs. Harvey, some 20 to 25 years ago. It has been much improved during the last few years, and a good volume of business, to a large extent of a season nature, is done. The shop at Weymouth has the conventional double frontage, and, though it has not so imposing an exterior as that of the Dorchester shop, there is an abundance of display room at the back, and the show room is quite as noble as the one at Dorchester; in fact, it is of better shape, being rather more square. Altogether, however, it is fitted up on very similar lines, as our additional photograph shows. This Weymouth branch is managed by Mr. C. A. Barnard, a son of the Mr. Barnard who has an important china business in Southport. The class of business done here is of a similar type to that transacted at Dorchester, plus the seaside souvenir trade.

THE NEW UNITED STATES TARIFF.

DURING November a Blue Book was published containing a copy of the New United States Tariff Act, with the former rates of duty for comparison. We abstract below the paragraphs relating to pottery, glass, &c. The old rates are distinguished by brackets.

SCHEDULE B.—EARTHS, EARTHENWARE, AND GLASSWARE.—Firebrick, magnesite brick, chrome brick, and brick not specially provided for in this section: Not glazed, enamelled, painted, vitrified, ornamented, or decorated in any manner, 10 per cent. ad val.; glazed, enamelled, painted, vitrified, ornamented, or decorated in any manner, and bath brick, 15 per cent. ad val. (Firebrick: Weighing not more than 10 lbs. each: Not glazed, enamelled, ornamented or decorated in any manner $1.25 c. ton, glazed, enamelled, ornamented or decorated 35 per cent ad val.; weighing more than 10 lbs. each and not specially provided for: Not glazed, enamelled, ornamented or decorated in any manner 30 per cent. ad val., glazed, enamelled, ornamented or decorated 35 per cent. ad val.; magnesite brick, chrome brick, and brick other than fire-brick: Not glazed, enamelled, painted, vitrified, ornamented or decorated in any manner 25 per cent. ad val., glazed, enamelled, painted, vitrified, ornamented, or decorated in any manner 35 per cent. ad val.)

Tiles, plain unglazed, one colour, exceeding 2 sq. ins. in size (04 c. sq. ft.), 01½ c. sq. ft.; tiles, glazed, ornamented, hand-painted, enamelled, vitrified, semi-vitrified, decorated, encaustic, ceramic mosaic, flint, spar, embossed, gold decorated, grooved and corrugated, and all other earthenware tiles and tiling, except pill tiles and so-called quarries or quarry tiles, 05 c. sq. ft.; (valued at not exceeding 40 c. per sq. ft., 08 c. sq. ft.; exceeding 40 c. per sq. ft., 10 c. sq. ft. and 25 per cent. ad val.); tiles wholly or in part of cement (not specified), 05 c. sq. ft.; so-called quarries or quarry tiles (45 per cent. ad val.), 20 per cent. ad val.; mantels, friezes, and articles of every description or parts thereof, composed wholly or in chief value of earthenware tiles or tiling, except pill tiles, 30 per cent. ad val.; (mantels, friezes, and articles of every description, composed wholly or in chief value of tiles or tiling, 60 per cent. ad val.).

Clays or earths: unwrought or unmanufactured, not specially provided for in this Section ($1 ton), 50 c. ton wrought or manufactured, not specially provided for in this Section ($2 ton), $1 ton. China clay or kaolin ($2 50 c. ton), $1 25 c. ton. Fluorspar ($3 ton), $1.50 c. ton. NOTE.—The weight of the casks or other container shall be included in the dutiable weight.

Common yellow, brown, or gray earthenware made of natural unwashed and unmixed clay; plain or embossed, common salt-glazed stoneware; stoneware and earthenware crucibles; all the foregoing: Not ornamented, incised, or decorated in any manner, 15 per cent. ad val.; ornamental, incised, or decorated in any manner and manufactures wholly or in chief value of such ware, not specially provided for in this Section, 20 per cent. ad val. Rockingham earthenware, 30 per cent. ad val.

Earthenware and crockery ware composed of a non-vitrified absorbent body, including white granite and semi-porcelain earthenware, and cream-coloured ware, and stone ware, including clock cases with or without movements, pill tiles, plaques, ornaments, toys, charms, vases, statues, statuettes, mugs, cups, steins, lamps, and all other articles composed wholly or in chief value of such ware: Plain white, plain yellow, plain brown, plain red, or plain black, not painted, coloured, tinted, stained, enamelled, gilded, printed, ornamented or decorated in any manner, and manufactures in chief value of such ware not specially provided for in this Section, 35 per cent. ad val.; painted, coloured, tinted, stained, enamelled, gilded, printed, or ornamented or decorated in any manner, and manufactures in chief value of such ware not specially provided for in this Section, 40 per cent. ad val.

China and porcelain wares composed of a vitrified non-absorbent body, which when broken shows a vitrified or vitreous, or semi-vitrified or semi-vitreous fracture, and all bisque and parian wares, including clock cases with or without movements, plaques, ornaments, toys, charms, vases, statues, statuettes, mugs, cups, steins, lamps, and all other articles composed wholly or in chief value of such ware: Plain white, or plain brown, not painted, coloured, tinted, stained, enamelled, gilded, printed, or ornamented or decorated in any manner, and manufactures in chief value of such ware not specially provided for in this Section, 50 per cent. ad val.; painted coloured, tinted, stained, enamelled, gilded, printed, or ornamented or decorated in any manner and manufactures in chief value of such ware not specially provided for in this Section, 55 per cent. ad val.

Earthy or mineral substances wholly or partially manufactured and articles and wares composed wholly or in chief value of earthy or mineral substances, not specially provided for in this Section, whether susceptible of decoration or not: Not decorated in any manner, 20 per cent. ad val.; decorated, 25 per cent. ad val. (Common yellow, brown, or gray earthenware, plain, embossed, or salt-glazed common stoneware, and earthenware or stoneware crucibles, all the foregoing not decorated in any manner, 25 per cent. ad val.); (yellow earthenware, plain or embossed, coated with white or transparent vitreous glaze, but not otherwise ornamented or decorated, and Rockingham earthenware, 40 per cent. ad val.); china, porcelain, parian, bisque, earthen, stone, and crockery ware, including clock cases with or without movements, pill tiles, plaques, ornaments, toys, charms, vases, statues, statuettes, mugs, cups, steins, and lamps all the foregoing, wholly or in chief value of such ware; painted, coloured, tinted, stained, enamelled, gilded, printed or ornamented or decorated in any manner; and manufactures in chief value of such ware not specially provided for, 60 per cent. ad val.); (china, porcelain, parian, bisque, earthen, stone, and crockery ware, plain white, plain brown, including clock cases with or without movements, pill tiles, plaques, ornaments, toys, charms, vases, statues, statuettes, mugs, cups, steins, and lamps, all the foregoing wholly or in chief value of such ware; not painted, coloured, tinted, stained, enamelled, gilded, printed, or ornamented or decorated in any manner; and manufactures in chief value of such ware not specially provided for, 55 per cent. ad val.); earthy or mineral substances wholly or partially manufactured, 20 per cent. ad val.; (articles and wares composed wholly or in chief value of earthy or mineral substances, not specially provided for, whether susceptible of decoration or not: If not decorated in any manner 35 per cent. ad val., if decorated 45 per cent.).

Plain green or coloured, moulded or pressed, and flint, lime, or lead glass bottles, vials, jars, and covered and uncovered demijohns, and carboys, any of the foregoing, filled or unfilled, not otherwise specially provided for in this Section, and whether their contents be dutiable or free (except such as contain merchandise subject to an ad valorem rate of duty, or to a rate of duty based in whole or in part upon the value thereof, which shall be dutiable at the rate applicable to their contents), 30 per cent. ad val.; (if holding more than 1 pint, 01 c., but not less than 40 per cent. ad val.; if holding not more than 1 pint and not less than ¼ pint, 01½ lb., but not less than 40 per cent. ad val.; if holding less than ¼ pint, 50 c. gross, but not less than 40 per cent. ad val.). NOTE.—The terms

bottles, vials, jars, demijohns, and carboys, as used herein, shall be restricted to such articles when suitable for use as and of the character ordinarily employed as containers for the holding or transportation of merchandise, and not as appliances or implements in chemical or other operations.

Glass bottles, decanters, and all articles of every description composed wholly or in chief value of glass, ornamented or decorated in any manner, or cut, engraved, painted, decorated, ornamented, coloured, stained, silvered, gilded, etched, sand blasted, frosted, or printed in any manner, or ground (except such grinding as is necessary for fitting stoppers or for purposes other than ornamentation), and all articles of every description, including bottles and bottle glassware, composed wholly or in chief value of glass blown either in a mould or otherwise ; all of the foregoing, not specially provided for in this section, filled or unfilled, and whether their contents be dutiable or free (60 per cent. ad val.), 5 per cent. ad val. NOTE.—For the purposes of this Act, bottles with cut-glass stoppers shall, with the stoppers, be deemed entireties.

Unpolished, cylinder, crown and common window glass : Not exceeding 150 sq. in., $\frac{7}{8}$c. lb. ; (valued at not more than $1\frac{1}{2}$c. per lb., $1\frac{1}{4}$c lb. ; valued at more than $1\frac{1}{2}$c. per lb., $1\frac{3}{8}$c. lb.) ; above that, and not exceeding 384 sq. in. 1c lb. ; (valued at not more than $1\frac{3}{4}$c. per lb. $1\frac{3}{4}$c. lb., valued at more than $1\frac{3}{4}$c. per lb. $1\frac{7}{8}$c. lb.) ; above that, and not exceeding 720 sq. in., $1\frac{1}{8}$c. lb. ; (valued at not more than $2\frac{1}{8}$c. per lb. $2\frac{1}{4}$c. lb., valued at more than $2\frac{1}{8}$c. per lb. $2\frac{3}{8}$c. lb.) ; above that, and not exceeding 1,200 sq. in., $1\frac{1}{2}$c. lb. ; (above 720 and not exceeding 864 sq. ins. $2\frac{3}{4}$c. lb., above 864 and not exceeding 1,200 sq. ins. $3\frac{1}{4}$c. lb.) ; above that, and not exceeding 2,400 sq. ins ($3\frac{3}{4}$c. lb.), $1\frac{7}{8}$c. lb. ; above that ($4\frac{1}{4}$c. lb.), 2c. lb. NOTE.—Unpolished, cylinder, crown, and common window glass, imported in boxes, shall contain 50 sq. ft., as nearly as sizes will permit, and the duty shall be computed thereon according to the actual weight of glass.

Cylinder and crown glass, polished : Not exceeding 384 sq. ins. (4c. sq. ft.), 3c. sq. ft. ; above that, and not exceeding 720 sq. ins. (6c. sq. ft.), 4c. sq. ft. ; above that, and not exceeding 1,440 sq. ins. (12c. sq. ft.), 7c. sq. ft. ; above that (15c. sq. ft.), 10c. sq. ft.

Fluted, rolled, ribbed, or rough plate glass, or the same containing a wire netting within itself, not including crown, cylinder, or common window glass : Not exceeding 384 sq. ins. ($\frac{3}{4}$c. sq. ft.), $\frac{1}{2}$c. sq. ft. ; all above that, 1c. sq. ft. ; (above 384 and not exceeding 720 sq. ins. $1\frac{1}{4}$c. sq. ft., above that $1\frac{3}{4}$c. sq. ft.) ; all fluted, rolled, ribbed or rough plate glass, weighing over 100 lbs. per 100 sq. ft., shall pay an additional duty on the excess at the same rates herein imposed. NOTE.—All of the above plate glass, when ground, smoothed, or otherwise, obscured, shall be subject to the same rate of duty as cast polished plate glass unsilvered.

Cast polished plate glass, finished or unfinished and unsilvered, or the same containing a wire netting within itself. (The former Tariff did not contain the words "or the same containing a wire netting within itself.) : Not exceeding 384 sq. ins. (10c. sq. ft.), 6c. sq. ft. ; above that, and not exceeding 720 sq. ins. ($12\frac{1}{2}$c. sq. ft.), 8c. sq. ft. ; all above that ($22\frac{1}{2}$c. sq. ft.), 12c. sq. ft.

Cast polished plate glass, silvered, cylinder and crown glass, silvered, and looking-glass plates exceeding in size 144 sq. ins., shall be subject to a duty of 1c. per sq. ft. in addition to the rates otherwise chargeable on such glass silvered. (Cast polished plate glass, silvered ; cylinder and crown glass, silvered ; and looking-glass plates : Exceeding in size 144 sq. ins., and not exceeding 384 sq. ins. 11c. sq. ft., above that, and not exceeding 720 sq. ins. 13c. sq. ft., above that 25c. sq. ft.) NOTE.—No looking-glass plates or glass silvered, when framed, shall pay a less rate of duty than that imposed upon similar glass of like description not framed, but shall pay in addition thereto upon such frames the rate of duty applicable thereto when imported separate.

Cast polished plate glass, silvered or unsilvered, and cylinder, crown, or common window glass, silvered or unsilvered, polished or unpolished, when bent, ground, obscured, frosted, sanded, enamelled, bevelled, etched, embossed, engraved, flashed, stained, coloured, painted, ornamented, or decorated (subject to a duty of 5 per cent. ad val. in addition to the rates otherwise chargeable thereon), 4 per cent. ad val.

Spectacles, eye-glasses, and goggles, and frames for the same, or parts thereof, finished or unfinished, 35 per cent. ad val ; (valued at not over 40c. per doz. 20c. doz. and 15 per cent. ad val., valued at over 40c. per doz. and not over $1 50c. per doz. 45c. doz. and 20 per cent. ad val., valued at over $1 50c. per doz. 50 per cent. ad val.).

Lenses of glass or pebble, moulded or pressed, or ground and polished to a spherical, cylindrical, or prismatic form, and ground and polished plano or coquill glasses, wholly or partly manufactured, 25 per cent. ad val. ; (with the edges unground, 45 per cent. ad val., with their edges ground or bevelled 10c. doz. prs. and 45 per cent. ad val.)

Strips of glass, not more than 3 ins. wide, ground or polished on one or both sides to a cylindrical or prismatic form, including those used in the construction of gauges, and glass slides for magic lanterns (45 per cent. ad val.), 25 per cent. ad val.

Opera and field glasses, optical instruments, and frames and mountings for the same ; all the foregoing not specially provided for in this section (45 per cent. ad val.), 35 per cent. ad val.

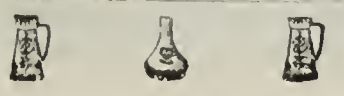
Surveying instruments, telescopes, microscopes, photographic and projection lenses, and frames and mountings for the same (45 per cent ad val.), 25 per cent. ad val.

Stained or painted glass windows, or parts thereof, and all mirrors, not exceeding in size 144 sq. ins., with or without frames or cases (45 per cent. ad val.), 30 per cent. ad val. ; incandescent electric light bulbs and lamps, with or without filaments (45 per cent. ad val.), 30 per cent. ad val. ; all glass or manufactures of glass or paste or of which glass or paste is the component material of chief value, not specially provided for in this Section (45 per cent. ad val.), 30 per cent. ad val.

Fusible and glass enamel not specially provided for in this Section (25 per cent. ad val. fusible enamel), 20 per cent. ad val. ; opal or cylinder glass tiles or tiling (60 per cent. ad val.), 30 per cent. ad val.

SCHEDULE M.—PAPERS AND BOOKS.—Decalcomanias in ceramic colours, weighing not over 100 lbs. per 1,000 sheets, on a basis of 20 by 30 ins. in dimensions (70c. lb. and 15 per cent. ad val), 60c. lb. ; all other decalcomanias, except toy decalcomanias, 15c. lb. ; (decalcomanias in ceramic colours weighing over 100 lbs. per 1,000 sheets on the basis of 20 by 30 ins. in dimensions, 22c. lb. and 15 per cent. ad. val., decalcomanias backed with metal leaf 65c. lb., all other decalcomanias, except toy decalcomanias 40c. lb.).

FREE LIST.—Common blue clay and Gross-Almerode glass-pot clay, in cases or casks, suitable for the manufacture of crucibles and glass melting pots or tank blocks (free) ; cobalt and cobalt ore (free) ; spurs and stilts used in the manufacture of earthenware, porcelain, and stoneware (free).



Correspondence.

These columns are open to members of the trade for the discussion of trade topics. There are many questions affecting the trade which will be the better for a free discussion.

THE COAL PROBLEM.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—Your article on Coal is of the utmost importance. It is a matter that has been overlooked by the country. But drastic steps will have to be taken or the trade of this country will be gradually ruined. I know many firms whose coal bills have increased from £500 to £2,000 up during last few years, simply by the rise in coal, as you state. It is really abominable the way the coal owners and miners are playing this game.—Yours, &c.,

A MIDLANDS SUBSCRIBER.

Nov. 11.

THE ANALYSIS OF CLAYS.

TO THE EDITORS OF "THE POTTERY GAZETTE."

SIRS,—I have read the correspondence between your reviewer and Dr. Mellor, and as I recently purchased a copy of the book in question, the correspondence is all the more interesting. As one who has had considerable practical experience in chemical analysis and ceramic chemistry, perhaps you will permit me to make a few remarks. I do not know Dr. Mellor personally, nor am I aware of the reviewer's name, so anything I say is from an unbiassed point of view. Dr. Mellor's book, in my estimation, must rank as one of the most important contributions to chemstry books yet published, and shows a wide range of study, reading, and actual experiment.

He has not laid down any standard method to be used in conducting analysis in this volume, and rightly so, but leaves one to be guided by their own experience and intelligence. Chemical processes require "humouring," or in other words, getting the "knack" of the process, the getting of which puts the smart chemist in front of his weaker brother.

Dr. Mellor's suggestion (which the reviewer does not endorse) that in the case of disputes to let those at variance test a standard sample, is one which I trust may be made more universal. Along with the sample, however, a standard method might be given approved of by recognised authorities. A friend of the writer's, in order to satisfy himself as to the accuracy of the per cent. of a certain element in a sample, sent the same sample to a number of well-known chemists in this country, the Continent, and America. The estimation was to be conducted by as many processes as they thought to be accurate, and to state what, in their opinion, was the true result. The results of each analyst varied greatly from one another and from that of my friend, with the exception of one chemist, a leading authority in certain work.

As the gentleman I refer to is chief chemist in the largest works in this country, his figure, and that of the leading authority referred to, must be taken as the correct one. When one knows of such things, the sooner a change is made in regard to the manner by which disputes are settled the better. With Dr. Mellor, I must agree there is much guessing and doing estimations by difference, by so-called reliable analysts; and I could give many instances of slipshod work, especially in determining the alkalies. The only reliable method, in my estimation, for alkalies in silicates is the Lawrence Smith process, and the estimation of the potash by platinum chloride. Even then the potash might be high if the platinum chloride solution is not absolutely pure. Mr. R. R. Tatlock, city analyst, Glasgow, is responsible for having brought this process to a high degree of perfection, and he has read numerous papers on this particular process. I had at one time the good fortune of being an assistant with Mr. Tatlock, and he calls the purity of the platinum chloride "the keystone of the process." As platinum chloride solution is not, as a rule, absolutely pure to be relied upon without special preparation, erroneous results must follow unless it is purified. Apart from the error of using impure platinum chloride, too many make the mistake of taking the potassium chloroplatinate to dryness. It is preferable to stop the evaporation before that stage is reached, and to precipitate in a dilute solution acidified with hydrochloric acid. Another important point is to digest the residue in a strong solution of platinum tetrachloride, which dissolves sodium compounds.

Of course, in the case of sulphates some means of removing the sulphuric acid (which is formed during the precipitation of the potassium chloraplatinate) must be taken in order to get the correct percentage of potash. Some recommend the conversion of the sulphate into chloride by decomposing with barium chloride, but the addition of an equivalent of sodium chloride gives satisfactory results.

The reviewer adversely criticises the beginning chapters as elementary and obtainable in a cheaper book. I have seen most elementary treatises on chemistry, but must admit that Dr. Mellor has written these so-called elementary parts in a particularly interesting manner, and has shown that what is too often ignored as being of "first stage" writing, contains a large field for research. A number of the supposed elementary parts of chemistry, when fully investigated, lose their elementary form and divert themselves into interesting problems of physics and mathematics. I venture to say that the reviewer's criticisms have enhanced the value of Dr. Mellor's work, and all intelligent and progressive chemists will find the volume an acquisition to their library.

Competition in all businesses, and especially in the fireclay and ceramic industry, has become abnormally keen. The concerns which achieve the largest degree of success are conducted on more or less scientific lines, based upon certain ascertained principles. The successful businesses of the future will be those which not only in management, but in every unit of the rank and file, apply their highest powers of intellect and conscience to the conduct of affairs.

The work that Dr. Mellor has accomplished in this direction in the fireclay and ceramic industries has been of invaluable service both from a scientific and practical standpoint, and his latest publication will be a decided acquisition in training men to keep abreast against our powerful Continental competitors.—Yours, &c.,

ARTHUR A. KNOX (Technical Chemist).
Glenboig Union Fireclay Co., Ltd.,
Glenboig, N.B., Nov. 13.

ANSWERS TO CORRESPONDENTS.

B. F.—The Tivoli pattern (R. H. & S. 2436) was sold to Mr. T. H. Breeze, Hanley, and has, in all probability, been destroyed.

Glass.—Silica, pearl ash, soda ash, red lead, and black oxide of mangancse are the chief chemicals or minerals used in glassmaking.

R. S. L.—Perhaps the same process as is adopted for applying ceramic transfers to china would answer for glass,

provided a suitable kiln could be found for making them permanent.

B. G. L.—A Chinese and Japanese hawthorn pattern is now very popular, and consists of an all over very dark blue design, the only white part showing being the petals of the flowers and the stems, the remainder being a solid blue back-ground. The pattern is put on chamber sets (five pieces) or in sets of five on bulb bowls, single, or, no doubt if required, in sets of five also on vases, &c.

R. L.—Block printing, we assume, refers to ordinary flat printing or transfer in one colour. This is done by means of engraving the pattern on plate of copper, which is afterwards "steeled" over for protection. The colour (ceramic colour), which is made workable by fine grinding and mixing with a good quality of oil, is rubbed well into the engraving, all surface colour being carefully removed to prevent stain. The design is then transferred to a specially prepared transfer paper (a kind of strong white tissue) by means of a press, and the paper is afterwards applied to the ware, and well rubbed. The paper is then washed off in water, and the colour and oil remain. The oil is removed in the process of kiln firing, and the colour is fastened on by the same operation.

Inquiries Answered by Post for :—Printed Toilet ware, "Flaxman," Rd. No. 474,756 ; Dinner Ware, Rd. No. 104,604 (for this we had to search the records for 25 years back) ; Dinner ware, Rd. No. 266,241 (registered 18 years ago) ; Dinner Ware, "Leighton," Rd. No. 300,714 ; "Lightning" egg separators ; China Tea Set, Rd. No. 290,035 ; Dinner ware marked K. & Co., with a man in a kneeling position (this mark is given in our 1914 DIARY). China teaware, Rd. No. 109,751 (registered in 1888) ; China, Reg. No. 151,437 (reg. in 1890) ; dinner service marked with a garter bearing the word "Oceanic," surmounted by a crown and enclosing the inscription C. & H., Tunstall.

THE MAGNETIC MATERIALS IN CLAYWARES.

(SPECIALLY ABSTRACTED.)

A HIGHLY technical treatise, which would seem to have involved considerable research work in a somewhat abstruse subject, has recently been contributed by Mr. Arthur Hopwood, of Tunstall, to the Royal Society, and has appeared in Vol. 89 of that Society's "Proceedings." We have received a copy of the paper in question, but the limits of our space preclude us doing more than to quote a few extracts therefrom, and, of course, we have also to bear in mind that the work is of such a scientific character that not more than a limited group of the readers of THE POTTERY GAZETTE would be likely to be keenly interested in its significance. In order to show, however, that Mr. Hopwood's researches are likely to be placed on record as data in a chain of discovery, it ought to be mentioned that his work was recently brought up for consideration at a meeting of the English Ceramic Society, and, following a short discussion, the object of which was merely to secure further information on points of detail, expressions of tribute were passed to Mr. Hopwood by several of the members for what was regarded as a valuable piece of work in the interests of the clay industries generally.

The early part of Mr. Hopwood's paper is devoted to a rapid résumé of past research work in regard to the magnetic properties of burnt claywares. The author points out that Robert Boyle was the first to observe the magnetic nature of burnt clays, finding that a brick, after being heated in a fire, and subsequently allowed to cool in the same position, became magnetised in the same direction as the earth's magnetic field. Later, J. B. Beccaria observed that bricks or ferruginous stones which had been struck by lightning were also permanently magnetised in the same direction as the earth's magnetic field. But it was Gheradi who was the first to make a systematic study of the magnetism of burnt clays ; it was he who demonstrated the existence of permanent magnetism of all kinds of earthenware or stoneware, and who further observed that antique claywares permanently retained the magnetism induced in them during the process of baking, irrespective of the positions they afterwards occupied with respect to the earth's magnetic field. In brief, the researches of Gheradi established the existence of permanent magnetism in all kinds of antique and modern claywares, and also demonstrated its influence on the measurements of the terrestrial magnetic elements in brick edifices. Giuseppe Folgheraiter advanced the view that the various claywares found in excavations and ancient tombs afforded an indelible record of the state of the earth's magnetism at the epoch and place of their manufacture, and thereby furnished an indirect means of enlarging our knowledge of the secular variation of the magnetic inclination of the earth. Determining the directions of the magnetic axes of a number of antique vases, the dates and places of manufacture of which were known, Folgheraiter was led to assign definite values to the magnetic inclination at the time and place of their manufacture.

But the work of this reputed investigator, more recently extended by B. Brunhes, P. David, and P. L. Mercanton, had almost exclusively for its object the determination of the orientation of the magnetism in antique claywares as a means of extending the knowledge of the secular changes in the magnetic inclination of the earth. In all these memoirs on the magnetism of burnt clays it was assumed that baked clays owed their magnetic properties entirely to the presence of magnetic oxide of iron, and that this was derived partly from the orientation of the magnetite originally present in the clays, and partly from the reduction of the ferric oxide of the clays during the process of burning. Numerous observations on different kinds of claywares led the author to conclude that this view was too limited, and that white, cream, grey, yellow, buff, red, or brown claywares were feebly or moderately magnetic owing normally to the presence of black unfused grains of unchanged magnetic minerals and bluish-black fused globules of ferruginous silicates ; while flashed, brindled, or blue claywares were strongly magnetic owing to the presence of ferruginous silicates and magnetic oxide of iron.

The author proceeds to deal at some length with the nature of the magnetic materials in claywares, and shows how the results of analyses of fused globules from white, cream, grey, yellow, buff, red or brown claywares have been to indicate that normally such claywares owe their magnetic properties partly to the presence of black unfused grains of unchanged ferruginous minerals, and partly to the presence of bluish-black fused globules of complex ferruginous silicates. He goes on to say :

"When grey, yellow, buff, red, or brown claywares have been flashed, i.e., partly reduced, in the baking process so that their surfaces become greenish-black or bluish-black in places, they invariably contain more fused globules of ferruginous silicates than the corresponding normally fired claywares, together with varying amounts of an unfused magnetic material present in the greenish-black or bluish-black patches. In some claywares, these unfused bluish-black patches can easily be separated mechanically from the fused globules of ferruginous silicates, but as their magnetic constituent is so uniformly distributed throughout the bluish-black patches it cannot

be separated mechanically from the main body of the claywares. On analysis, a greenish-black patch on a piece of slightly flashed terra-cotta gave 2·1 per cent. of ferrous oxide and 6·5 per cent. of ferric oxide, indicating that only part of the ferric oxide had been reduced to magnetic oxide of iron, while a bluish-black patch on a badly-flashed red brick made from the same clay gave 2·8 per cent. of ferrous oxide and 5·7 per cent. of ferric oxide, corresponding to the proportions of these oxides in magnetic oxide of iron. Hence, the unfused magnetic material present in the greenish- or bluish-black patches on grey, yellow, buff, red, or brown claywares is magnetic oxide of iron.''

Under the heading ''The Origin of the Magnetic Materials in Claywares,'' the author claims that as ordinary clays contain but small amounts of magnetite, only a small proportion of the magnetic oxide of iron present in flashed, brindled or blue claywares can have been derived from the magnetite originally present in the clays, and consequently the larger proportion must obviously have been produced by the reducing action of the kiln gases on the finely divided oxides, hydroxides or carbonates of iron distributed uniformly throughout the clays.

It was well-known by clayworkers that when a clay containing granules or concretions of ferruginous minerals is easy-fired in a strongly oxidising atmosphere, these minerals are left in the product as unfused black grains, while if the clay be fast-fired or hard-fired in a slightly oxidising or neutral atmosphere, or better if the clay be over-fired in a slightly reducing atmosphere, these minerals fuse with the surrounding matrix, producing small bubbles or large blisters of a bluish-black ferruginous slag. In conformity with this, the author observes that easy-fired white, cream, grey, yellow, buff, red, or brown claywares are less magnetic than hard-fired claywares and considerably less magnetic than over-fired claywares made from the same clays.

The author proceeds to explain tests made with six samples of clays used in the manufacture of different kinds of wares, the final results of which went to show that ordinary clays, when heated up strongly in reducing kilns, become highly magnetic, due to the formation of complex ferruginous silicates, and magnetic oxide of iron.

Many other statements and facts are, of course, observed by the author in his handling of the subject, and a feature of the paper is the exposition of the six tests made with china clay, ball clay, stoneware clay, fireclay, common brick clay, and red terra-cotta respectively, a graphic statement being given in regard to each, first as to its uses or the materials manufactured from it, and secondly as to the combined amount of magnetic material in each variety. To quote in this connection would, however, make too heavy a demand upon our space. We will, therefore, close by giving the author's general conclusions formed from these six analyses, that all baked claywares are magnetic, and that different kinds, as well as different specimens of the same kind, contain extremely varying amounts of black magnetic materials. Black, blue, or brindled claywares, and also badly-fired grey, yellow, buff, red, or brown claywares having black interiors, speckled bodies, or flashed surfaces, are almost invariably strongly magnetic; while white, cream, grey, yellow, buff, red, or brown claywares having none of these imperfections are always feebly magnetic. Whenever claywares have speckled bodies, flashed surfaces, or black cores, they are always much more magnetic than the corresponding ones free or relatively free from these defects; and, consequently, the intensities of the magnetisation of any white, cream, grey, yellow, buff, red, or brown claywares can be roughly inferred from a cursory examination of the extent of the speckling, flashing, or black-coring they exhibit.

In a final word regarding the suitability of building materials for the construction of physical laboratories and magnetic observatories, Mr. Hopwood suggests that the strongly magnetic nature of certain claywares shows that great care must be exercised in the choice of these materials for the construction of magnetic observatories and physical laboratories, or serious disturbances may take place during observations with delicate magnetic instruments. Many physical laboratories, he considers, are in existence in which greater care in the selection of the claywares used would have considerably reduced the magnetic disturbances existing in them. Some are built with badly speckled and flashed bricks, and others even contain brindled and blue claywares. These are not by any means the least magnetic of the claywares, and consequently on delicate magnetic instruments they will cause disturbances which could have been easily reduced to a negligible extent by a more careful selection of the building materials.

Empire Notes.

The Production of Kaolin in Victoria during 1912 amounted to 288 tons, valued at £342 as compared with 371 tons, valued at £440, produced in 1911.

Mr. Ernest L. Price, buyer for Grace Bros., merchants, Sydney, N.S.W., is leaving by the ''Orama'' on Dec. 6, and will be paying a visit to the Potteries district about the middle of January.

Fancy Glass Jars for table or sideboard use, e.g., fancy pickle, honey, and celery jars, are dutiable on importation into the Australian Commonwealth at 25 per cent. ad val. General Tariff and 20 per cent. Preferential Tariff, according to a recent revised Customs decision.

Trade Opening in Canada.—The Industrial Commissioner of a Canadian city, who is desirous of bringing before the notice of United Kingdom exporters the possibilities of trade in his district, makes inquiry for the names of exporters of glassware, lighting fixtures, &c. Names may be obtained by United Kingdom manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C., mentioning this GAZETTE.

Tiles Wanted in New Zealand.—H.M. Trade Commissioner for New Zealand reports that a firm of manufacturers' agents in Auckland, already representing several United Kingdom manufacturers, wishes to secure the agency of United Kingdom manufacturers of tiles. The name and address of the firm may be obtained by United Kingdom manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C. Any further communications regarding the inquiry should be addressed to H.M. Trade Commissioner, P.O. Box 369, Wellington, New Zealand, mentioning THE POTTERY GAZETTE.

Tile Exports from Salonica.—The exports from the local factory in 1912 consisted of 2,395,000 tiles and 620,000 bricks, &c., to the principal towns of the interior —Cavalla, Dedeagatch, Stratoni, Yerakino, &c.



THE POTTERY INDUSTRY IN THE U.S.A.

(*Concluded from page* 1257.)

THE number of States reporting for 1912 ware classed as pottery in this report was 37, a decrease of 1, New Mexico reporting no pottery for that year. The important producing States, especially those reporting production of the higher grades of ware, are few. White earthenware was reported from 11 States, an increase of 2, California and Michigan reporting for 1912; china from 4, the same as for 1911; sanitary ware from 8, a decrease of 2, Maryland and Virginia; porcelain electrical supplies from 11, an increase of 1, California.

Red earthenware, the commonest of pottery products, was reported from 30 States, the same number as for 1911; but Minnesota reported none, and Louisiana once again entered the list of producers. Ohio was the leading State in 1912, as in 1911, reporting products valued at $263,085, an increase of $30,025, or 12·88 per cent. Massachusetts was second, displacing by a narrow margin Pennsylvania, which was third. In 1912 the value of the product of Massachusetts increased $12,972, or 8·65 per cent., while that of Pennsylvania increased but 1·70 per cent. These three States reported 61·38 per cent. of the total value of this product in 1912, as compared with 60·71 per cent. in 1911 and 57·25 per cent. in 1910. Red earthenware was reported by 145 producers in 1912, by 160 in 1911, and by 159 in 1910. In 1912 it constituted 2·63 per cent. of the total value of pottery, and in 1911, 2·59 per cent.

Stoneware, including yellow and Rockingham ware, was reported from 29 States in 1912, the same as for 1911. Ohio, in 1912, as for many years, was the leading State, reporting an output valued at $1,832,266, or 46·74 per cent. of the total. This was an increase of $73,481, or 4·18 per cent. Illinois, as in 1911, was second, showing a decrease of $157,567, or 18·92 per cent. The number of producers reporting this variety of pottery continues to decrease, 163 reporting for 1912 as compared with 175 for 1911, 180 for 1910, and 196 for 1909. Stoneware constituted 10·74 per cent. of the value of pottery in 1912, 11·94 per cent. in 1911, and 11·24 per cent. in 1910.

The tables show that the pottery products of greatest value are embraced under the heading white ware, which represents general household wares. Ohio has been the leading producer of these wares for many years, and reported for 1912 white ware valued at $9,969,491, an increase of $357,176, or 3·72 per cent. Ohio's output in 1912 was 67·23 per cent. of the value of the entire product, as against 66·91 per cent. in 1911 and 65·83 per cent. in 1910. West Virginia was second, as for several years, and reported wares valued at $2,051,987, an increase of $131,693, or 6·86 per cent. over 1911. New Jersey was third in both years, reporting wares valued at $1,090,683 in 1912, a decrease of $58,221, or 5·07 per cent. White ware constituted 40·62 per cent. of all pottery products in 1912, 41·62 in 1911, and 43·75 per cent. in 1910. The number of producers reporting white ware in 1912 was 63, the same as in 1910 and 2 greater than in 1911.

China was reported from four States in 1912, as in 1911. New Jersey was the leading State, as in 1911, and reported china valued at $1,155,766, an increase of $50,488, or 4·57 per cent. The output of New Jersey in 1912 constituted 53·08 per cent. of the entire product. New York was second and Pennsylvania third. The production of china, the most beautiful pottery ware, is still of little commercial importance, but has made steady progress, and no doubt will in time be an important branch of the industry. The value of the china made in 1912 was only 5·96 per cent. of the value of the pottery products of the country, the same as in 1911; in 1910 it was 5·81 per cent. of the total value. The number of operators reporting china in 1912 was 16, an increase of 1 over 1911.

In the production of sanitary ware New Jersey is the leading State, reporting ware valued at $5,199,278, an increase of $300,690, or 6·14 per cent. New Jersey's output was 65·79 per cent. of the total for 1912. West Virginia was second, reporting wares valued at $1,156,478, an increase of $341,879, or 41·97 per cent. Indiana was third, reporting an increase of $84,108, or 15·31 per cent., over 1911. The number of producers reporting increased by 4 in 1912. Sanitary ware was 21·65 per cent. of the value of pottery products in 1912, 20·37 per cent. in 1911, and 20 per cent. in 1910.

Ohio was the largest producer of porcelain electrical supplies in 1912, as in 1911, reporting an output valued at $1,827,290, or 37·08 per cent. of the total. This was an increase of $216,365, or 13·43 per cent. New York was second and New Jersey third, as in 1911. New York's output increased $280,392, or 28·36 per cent., and New Jersey's $232,546, or 25·44 per cent. These three States contributed 86·11 per cent. of the total value of porcelain electrical supplies in 1912. The number of producers reporting this variety was 34, a decrease of 2. This variety constituted 13·50 per cent. of the value of all pottery in 1912, 12·26 per cent. in 1911, and 11·23 per cent. in 1910.

Ohio continued to be the leading pottery-producing State of the Union, reporting for 1912 wares valued at $15,508,735, or 42·49 per cent. of the total, an increase of $733,470, or 4·96 per cent. Ohio's principal pottery product is white ware, which constituted 64·28 per cent. of its entire pottery output in 1912. New Jersey is the second largest pottery-producing State. For 1912 it reported wares valued at $8,935,920, or 24·48 per cent. of the total, an increase of $533,979, or 6·36 per cent. New Jersey's principal pottery product is sanitary ware, which was 58·18 per cent. of its total for 1912. West Virginia was third in 1912, reporting ware valued at $3,365,166, or 9·22 per cent. of the total, an increase of $484,964, or 16·84 per cent. New York was fourth, as in 1911, and Pennsylvania fifth, the former reporting 6·59 per cent. of the total and the latter 5·83 per cent. Indiana and Illinois maintained their relative ranks of sixth and seventh with 2·95 per cent. and 2·55 per cent. of the total respectively. The first five States—Ohio, New Jersey, West Virginia, New York, and Pennsylvania—reported 88·61 per cent. of the total production in 1912; in 1911, these States reported 88·04 per cent., and in 1910, 88·60 per cent.

In considering the rank of States it should be borne in mind that the small number of producers in many of them in 1912, which prevents the publication of State totals without disclosing individual returns, makes the rank of all but the first few the relative and not the actual rank.

The pottery imported into the United States in 1912 was valued at $9,555,530, and the production at $36,504,164, a total of $46,059,694. After deducting exports, domestic $1,177,784 and foreign $61,883, the net consumption was valued at $44,820,027, of which the domestic production was 81·45 per cent. In 1911 this percentage was 78·93 and in 1910 it was 77·08 and the next highest was in 1902 when it was 72·91.

Earthenware is mentioned in a British Consular Report from Portuguese Guinea among a list of articles in which British trade might be extended.

Porcelain Tableware to the weight of 26,946 metric tons, and valued at £1,209,500, was exported from the German Empire during the first nine months of 1913. The figures show a marked increase.

THE ENGLISH CERAMIC SOCIETY.

(BY OUR OWN REPORTER.)

THERE was a good attendance at the usual monthly meeting of the English Ceramic Society held at the Victoria Institute. Tunstall, on Saturday evening, November 15. Mr. W. Jackson occupied the chair, and Mr. H. H. Thompson, of Birmingham, read an interesting paper on

"THE EXTRACTION OF MAGNETIC IRON FROM POTTERS' MATERIALS."

The essayist, who made his second appearance before the Society (the first, which took place some five or six years ago, being reported upon in THE POTTERY GAZETTE at the time), emphasised the fact that he was neither a chemist nor a potter, and so he would deal with the subject in plain language, using only such technical terms as would be familiar to the whole of his audience. There was no need for him to dwell upon the inimical fact of iron being present in the materials worked by potters. His audience would doubtless be qualified to tell him something about that. He knew that it was supposed to be one of the greatest bugbears of the trade, and before he set himself out to devise a suitable apparatus for the purpose he had several conversations with the pottery manufacturers on the subject. From these conversations he gathered that the question was of such importance that no pottery firm would hesitate to spend anything in reason upon an apparatus which would be really effective. That was six years ago. Since then he had begun to wonder whether his visions were, after all, only a dream, for he had come to realise the truth of a manufacturing potter's note of warning that whilst such an apparatus as the one he had devised was undoubtedly just what was wanted, he must not expect to swim in with it; whilst another had suggested that usually the Staffordshire potter's method was to await the result of other people's trials of a new idea, and if it was successful he followed their lead. Personally he (the speaker) had found the potters to be a very conservative set. He had certainly not swam in, but he had just been able to keep afloat, and now, after this gentle dig which his memories forced from him, he would get to serious business.

He would not attempt to explain how iron got into the potter's materials. His task would be to tell him how to get it out. The large iron, such as tacks, nails, and the like, presented no real difficulty. It was the minute specks, most of them almost microscopic, which were so difficult to deal with. It was not sufficient that the magnet was of exceptional power unless the iron got within its effective range, and matters should be so designed as to bring this about.

He would deal first of all with slip. In the early days the ordinary potters' magnets, which were still in use, were almost universally employed. Then came the more powerful electro-magnets on the same principle, relying on a number of fingers or tongues magnetised by the main cores of the magnet, made of various sections of mild steel, set at certain distances apart, and staggered in such a manner that, in theory, if the first poles missed the iron by reason of its taking a course between them—and these minute particles would take a course—the poles next encountered, being placed opposite the space between these and the first, would arrest it, and so on with succeeding magnets.

The principle worked out only partially correct in practice, as his hearers would well know. The reason was simple. The iron was in such minute particles that it floated serenely amidst the liquid, and might be swept along a course right between the poles of a number of magnets, without necessarily ever touching one. Naturally the larger the number of magnets, the more likely would the iron be caught. It was quite erroneous to suppose that the permanent, or the electro-magnet, however powerful it might be, would attract these minute particles from a distance through slip. The slip offered too much resistance, and the particle of iron was so minute that it possessed only sufficient magnetic permeability to be held when actually in contact with the magnet. Therefore, it was absolutely essential that the iron should be forced into contact. Assuming that the iron did happen to come into contact with the magnet, where the form of pole was akin to a finger or tongue, it by no means followed that it would remain on it. What took place was this: the first beard became magnetised by induction, each layer, so to speak, becoming a magnet in itself, and would hold another layer or beard, but far less tenaciously than it was itself held. Succeeding layers had still less power, until ultimately no more iron was collected, and there was always a possibility of a bunch of iron being detached by the pressure or friction of the liquid when the magnet was overloaded. That was why potters had the magnets cleaned from time to time; else, why clean them?

If the raw electro-magnet would not attract from a distance, it followed that the beard could not; indeed, the beard on the north pole tended to reduce the stray magnetic field by means of which iron was attracted from a distance by inclining towards the south pole, and shortening its path. The practice was to run the liquid slowly, in the belief, he thought, that the longer it remained in the magnetic field the better. In his opinion it was wrong to suppose that the length of time during which the fine iron specks remained within the magnetic field had any appreciable effect where the liquid passed between poles. If the particles were heavy enough to gravitate on to the magnets, or be attracted from a distance, then this aspect might hold weight.

To make the disparity in dealing with a very minute speck of iron as compared with, say, a 6-in. wire nail more clear, he had prepared a slide showing the attractive power of an electro-magnet relative to the iron to be attracted. This would give a better idea of what it would and would not do, because many people had wrong ideas on the subject, never having experimented with the pull from a distance. He once read of a wonderfully brilliant idea by the aid of which some genius was going to make the capture of battleships five miles away as easy as sweeping a floor. The idea was to construct powerful electro-magnets which would attract ships at a distance five miles away, willy-nilly. When he told them that the magnet used in connection with the slide produced would lift a ton, and yet would attract a 6-in. nail from a distance of 10 ins. only, they might figure out for themselves what sort of a magnet would be required to attract a battleship from five miles.

The slide referred to showed the attractive power of the magnet to be as follows:—A 6-in. nail, 10 ins.; 5-inch nail, 8 ins.; 3-in. nail, 6 ins.; $\frac{1}{2}$-in. tack 4 ins.; $\frac{5}{8}$-in. nut, $2\frac{1}{2}$ ins.; $\frac{1}{2}$-in. nut, $2\frac{1}{2}$ ins; an iron speck, $2\frac{1}{2}$ ins. He hoped this would make it clear why specks were difficult to secure unless they were forced into contact with the magnet; and it was in this respect that the common practice was not sufficiently effective, because it resolved into a case of "hit or miss."

He had heard it suggested that by placing magnets closer together iron would not be so likely to get past. Quite true, but if this were done the flow would be dammed to such an extent that the business end of the magnet would encounter only a percentage of the slip. By widen-

ing the trough and increasing the number of magnets and running a shallow flow, the difficulty might be overcome to some extent, but particles would still float between. He noticed that the practice as regards the magnet trough varied very considerably in different works. Some works might employ only two dozen magnets, whereas another used twenty dozens. Some factories had their magnets recharged only once a week. In such cases the quality of the clay or glaze could not be uniform from day to day, because the magnets lost their strength, each day extracting less iron. Again, why any need to recharge them otherwise ?

Whatever the system might be, he thought it would be agreed, that if it embodied any manual labour, such as lifting out a number of magnets for cleaning purposes, the job, uninteresting enough in all conscience, particularly in the case of permanent magnets, was, for this reason, likely to be skulked by the man or boy whose duty it was to attend to them. He had also heard the argument put forward that the cost of attending to permanent magnets was not worth speaking of, but from a strictly business point of view it could not be argued that it was labour that did not have to be paid for.

At this point of his paper the essayist quoted the statements of a number of pottery manufacturers as regards the efficiency of the electro-magnet, as compared with the old horse-shoe magnets which, up to a short time ago, were almost universally used. Whatever the system was, however, it was a sine quâ non that there should be no gaps through which the iron could float. An illustration thrown on the screen showed a plant fixed for the purposes of demonstration in a practical manner. This arrangement was by no means arbitrary. Primarily, it consisted of an inclined trough having a series of electro-magnetic bars fixed laterally in the bottom, the magnet windings being housed underneath. The principle of the apparatus was exactly the same as that of the small apparatus, which the essayist demonstrated some years ago, but embodied improvements in detail. The bars were 2 ins. wide and the base $\frac{7}{16}$ in. thick. Each edge was magnetised the whole of its length and width. The projections were shaped like a fan, with the curved part facing the approach of the liquid, and they were $\frac{1}{2}$ inch high, tapering from $\frac{3}{4}$ in. wide to $\frac{1}{2}$ in. at the top. These curved faces had a number of vertical separations, creating a similar number of edges, each of which was magnetic.

It would be readily perceived that a liquid, having first to climb the edge of the bar, and being broken against these edges, was far more effectively dealt with than when flowing against the flat force of permanent magnets, or square or other sections of electro-magnetic poles. A momentary study of these details was sufficient to convince one that the bars with their projections were obstructions in every sense of the word, serving the dual purpose of breaking up the flow, and at the same time removing iron.

Another great point to be remarked was that the strongest part of a magnet was at the extreme end, and the longer the poles the more electric energy was required to fully saturate them. The length of the poles in the apparatus under review was simply the thickness of the bar plus the projections, so that complete saturation was ensured instead of only at the extremities. The only feature, probably, about which a point of criticism could be made, was that it cannot work successfully without inclination, and the angle of inclination was an important factor. Personally, the essayist preferred an angle of about 50 degrees, with a flow sufficiently shallow, though satisfactory results were being obtained with an angle of only 12 degrees. His point of view had been combatted by potters who had watched the apparatus at work for the first time, the pace at which the slip flowed being so revolutionary that it had always been considered too fast. But experience proved that the greater the fall the better ; naturally, however, at such an angle the flow must not be so great as to submerge the magnets. The necessity for the inclination mentioned was because the bars and the obstructions having to be overcome, the liquid must have sufficient gravitation to surmount these obstacles. If placed nearly flat the liquid would submerge the magnets and then run over itself, only that portion which actually touched the magnets being affected, so that the result would be unsatisfactory.

In further explanation of the operations of the apparatus recommended, it was stated that when the liquid reached the magnet trough it flowed along the bottom until it reached what might be termed the first dam. In climbing over this it must necessarily rub over the edges of the flat portion of the bar, and against the vertical edges of the projections, over the other edge of the bar on to the trough bottom, and it then encountered the second dam, where it passed through the same searching test, and so on all the way down the trough. It was a case of climb, rub and tumble the whole of the way, resulting in a thorough and systematic searching for iron, which almost inevitably came into actual contact with the magnets. Any iron that could successfully survive the ordeal of these magnets really deserved to get off scot free.

As showing what effect the fine iron had upon ware, the essayist recounted an experiment which told against himself, made by a well-known pottery firm. He himself treated some slip which had already been magnetted by passing about ten dozen magnets at the pottery works from which it emanated. This was made up into five undecorated plates, and five others were made of slip which had only been treated in the ordinary way. Some time later he called at the works as arranged to inspect the results. He was given the ten plates, and was asked to pick out his five. In his innocence he imagined they would be the cleanest and the whitest looking, and he thought he had no difficulty in picking them out, because the others had a faint bluish tinge. However, the ones he picked out were not his. The bluish ones were his, and the explanation given was that this faint bluish tinge was caused by the action of the cobalt, which, owing to the removal of thousands of minute specks of iron, which the ordinary process had missed, had had more effect on the colours. It would thus appear to the essayist that possibly some saving in cobalt, which he understood was expensive stuff, would be effected by adopting the new type of separator, irrespective of any other advantages which might accrue.

The latter part of the paper dealt with the treatment of glaze and bone ash, as regarded the magnetic separation of iron. Thick glaze could be just as successfully treated by the new process, providing sufficient fall were given to cause it to run down by gravity, but it would naturally be more easily treated if it could be thinned down.

Quite a fair section of the paper was concerned with the precautions taken in the apparatus to guard against that most unlikely contingency, the failure of current, and the alarm bell and collapsible bridge, which are amongst the later improvements of the apparatus, and which have already been called attention to in this Journal, were explained at some length.

In dealing with the treatment of bone ash, Mr. Thompson said he had seen some very crude attempts to eliminate iron from bone ash, such as placing a series of potters' magnets in a vertical shoot, staggered as for the slip trough, on what he would call the " hit or miss " principle. The bone ash was allowed to fall down the shoot, encoun-

tering the magnets on the way. Some iron was caught, of course, but how much remained after the next shower of bone came hurtling down ?

A better system was to pass the material over a revolving electro-magnetic drum. Certainly such iron as nails, bolts, screws, shoe-tips, horse-shoes and all large iron would be easily removed, but large quantities of fine particles would still be left, which, if this process was relied upon absolutely, would be ground up into finer particles still, and would be far more difficult to remove afterwards, particularly as much of it was only feebly magnetic, being more a form of burnt iron, or something akin. If this did not cause staining, he imagined it must at least tend to dirty the ground bone.

Another system was to allow the bone ash to slide down a patent electro-magnet similar to the one he had described for liquid, but minus any projections or obstructions, and stationary. Certain users of this system expressed their satisfaction with it, but he always endeavoured to persuade them not to use it as a stationary shoot, but to have the oscillating movement usually supplied with it. Personally, he was convinced that better results were obtainable by oscillating the separator laterally. The reasons for this he more particularly described.

The ideal method of dealing with bone ash was to first pass it over a drum type of separator to remove the large iron, and incidentally some fine iron, and then elevate it to pass down an oscillating shoot as described.

It might occur to someone to wonder why, if the apparatus was so perfect, any iron was left at all. To this he could only reply that no free magnetic iron was left. What was not recovered was either only feebly magnetic, or was embedded inside a ball of bone ash, or was adhering to it in such a manner that the magnet had no chance of recovering it. No magnetic separator had ever been built, or was likely to be built, which would make any material chemically free from iron. For all practical purposes a really efficient apparatus would, however, make it so nearly free that but little improvement would be noticeable if the mere trace left were removed, and the material was made chemically free from iron ; yet, until material had been effectively treated, its presence would be detectable by various signs, such as specks, however minute.

He was so satisfied that china could be much improved by the use of a suitable separator that he would be happy to provide the necessary apparatus for a series of experiments to some china manufacturers, provided he was allowed to superintend the process of magnetic separation, and a few other details by mutual arrangement. There was, he thought, much room for improvement in the respect mentioned, even in the ware of some of the firms of repute.

In the course of the discussion which followed the paper, Mr. J. A. Audley remarked that he thought that possibly the man who claimed to be neither a potter nor a chemist could often see all round a subject, whereas the potter and the chemist might only see one side of it, at least he could see certain aspects of it which would perhaps not have been seen by the man who described himself as a specialist. Mr. Thompson has referred to the conservatism of the potters. There was little doubt that that conservatism was deeply entrenched. The results described by the essayist would seem to be very promising, and it remained for the potters now to take advantage of his offer. He (the speaker) was afraid that that conservatism which had been referred to would be likely to stand in the way for some time yet of anything like a general application of the system, that it would be a long time yet before the old permanent magnets would be discarded, but he had no doubt that eventually they would come to be considered as little more than curiosities.

Mr. A. H. Ryles emphasised the fact that the firm to which the essayist was attached had gone to considerable trouble and expense to put potters on the right road, and he thought it would be a pity if they should suffer any loss thereby. They were certainly very conservative in the Potteries, and then, again, many would reply that they could not afford to install such an apparatus. But he would remind them that the cheapest thing was not always the cheapest in the long run ; it might, in fact, be the very dearest. He hoped they would try to support such men as Mr. Thompson, who were genuinely trying to put them in the direct way of definite improvement.

A vote of thanks to the essayist was proposed by Mr. J. P. Holdcroft, seconded by Mr. J. A. Audley, and was heartily accorded.

BOY LABOUR IN GLASS WORKS.

ON Nov. 7 a meeting of the glass trade was held at the Grand Hotel, Birmingham, attended by Messrs. J. S. Williams-Thomas (Stevens & Williams, Ltd., Brierley Hill), Congreve Jackson (Thomas Webb & Sons, Ltd., Stourbridge), J. Husselbee general secretary, National Flint Glass Makers' Society), W. Bradford (general financial secretary, National Flint Glass Makers' Society), S. Pearson (S. Pearson & Co., West Bromwich), James Field (Chance Bros. & Co., Ltd., Birmingham), Peter Gilston (president, Yorkshire Flint Glass Bottle Manufacturers' Association), W. J. Asquith (president, Yorkshire Glass Bottle Manufacturers' Association), F. Swann and G. Lister (National Flint Bottle Hands' Society), A. C. Powell (Powell & Ricketts, Bristol), and W. Bagley (Bagley & Co., Ltd., Knottingley—the Association of Glass Bottle Manufacturers of Great Britain and Ireland), A. Greenwood, J. E. Foxon, B. Holmes and R. Hunter (National Federation of Bottle Hands), E. V. Williamson (Leeds, secretary of the Association of Glass Bottle Manufacturers of Great Britain and Ireland). Mr. W. Bagley was unanimously elected chairman, and a general discussion showed that all present were in favour of retaining the present regulations in regard to the age of boys working at night. There was a unanimous expression of readiness to unite in taking whatever steps may be necessary to oppose any legislation which may be contemplated to carry out the recommendation of the Departmental Committee re night employment of male young persons. It was agreed that the findings of the Departmental Committee are not in accordance with the evidence given. On the proposition of Mr. P. Gilston, seconded by Mr. B. Holmes, it was unanimously resolved that a committee should be formed to collect evidence, and to take such steps as they may deem necessary to oppose any alteration in the regulations in reference to night employment of boys in the glass trade. It was proposed by Councillor Bradford, seconded by Mr. R. Hunter, and unanimously resolved, that such committee should consist of one employer and one employee from each of the four branches of the glass trade, with power to add to their numbere and that in case the representative nominated is unabl ; to attend any particular meeting, the branch in question may send a substitute. Mr. R. Hunter was appointed secretary.

On Nov. 18 the Runcorn Board of Guardians received a recommendation from the Dutton Children's Home Committee that Messrs. Spruce, Morris, & Wood be appointed a deputation to visit Pilkington Bros.' works at St. Helens to see what arrangements were made for the

care of boys. The matter arose from a letter which had been sent to the Children's Home Committee by Pilkington Bros., Ltd., that they were in want of about 15 boys for work at the glass trade at St. Helens, and that they would be glad to receive any boys the committee desired to recommend. They stated that they had a hostel where homeless boys were housed, and they had now something like 80 boys resident there. There was a master, matron, and servants to care for the boys, and various forms of recreation were provided. The employment at the glassworks was not a blind-alley occupation. The boys were kept free of charge, and received pocket money when off sick. They took the boys with a view to apprenticeship, and they gave them wages of 8s. 9d. to 10s. per week when commencing. After a long debate the board resolved to adhere to the committee's recommendation.

THE USE OF LEAD IN THE CERAMIC INDUSTRY.

(SPECIALLY TRANSLATED.)

THE Committee appointed by the Internationa Association for Protective Legislation for Workers, to discuss the question of lead in the ceramic industry, recently met at Basle, when Professor de Vooys reported that three proposals had been submitted by the British Section—the introduction of certain hygienic precautions in ceramic works; an endeavour to produce lead glazes which shall be less soluble, and, therefore, less dangerous than those at present used; the complete prohibition of lead glazes. In connection with the first, it was stated that the Special Rules enforced in England have greatly reduced the number of cases of poisoning, but nevertheless fatal cases still occur. Attempts to introduce leadless glazes are in progress, and such glazes are also regarded as practical by the Dutch; but it is considered that total prohibition of leadless glazes would meet with far greater difficulties than in the case, for example, of white phosphorous, and owing to the differences in technical practice, a special glaze would have to be established for each factory. In this connection the British Section thinks it would be possible to establish an international experimental station, but the other Sections are opposed to this, as introducing an entirely novel principle into the International Association, and as open to the objection that no State would recognise such a station as authoritative. Moreover, the use of leadless glazes would be impracticable in many works for a long time to come, and a considerable period of delay would have to be granted. On the other hand, the Committee is of opinion that lead glazes might be prohibited in the case of common earthenware, which comprises about 80 per cent. of the total ceramic wares produced, and by this means the risk of poisoning could be prevented in the great majority of instances. The Dutch Section desires to exclude from such prohibition lead glazes which are soluble only to the extent of 1 per cent., in order not to embarrass the small potters, and it is not opposed to an experimental station, provided the latter be merely advisory.

All these proposals, however, are regarded as not fully ripe, but require further investigation. On the other hand, the Committee thought it possible that the time had come to recommend certain government hygienic regulations which would, in themselves, lead to the abolition of lead, chief among them being to shorten the hours of labour and to forbid the employment of women and young persons in work exposing them to the risk of lead poisoning—though many difficulties stand in the way. A recommendation was also put forward that the assistance of the Institute for Industrial Hygiene, of Frankfurt-on-Main, should be called into requisition to a greater extent than heretofore.

The approval with which the report was received indicated general adhesion to the proposals advanced. With regard to a Committee of three (to which reference was also made in the report), Prof. Dragoni and Dr. von Ehrenfeld-Popp desired the number to be increased so as to afford all the principal States interested an opportunity of being represented. On the other hand, it was pointed out that no national question was involved, but only representation of the three official languages of the Conference. In order to simplify the work, it was therefore resolved to confine the membership of the said Committee to three, leaving the various sections free to delegate their own representatives for the discussion of questions of peculiar interest to their own country. It was also decided to invoke the assistance of institutions in other countries of a similar nature to the Frankfurt Institute.

A French Presidential decree, issued in October, calls upon the owners and managers of works, especially pottery and enamel works, which use lead in connection with their manufacturing processes, to adopt the following special precautionary measures in addition to the general measures prescribed by the decree of July 10 last:—Crucibles in which lead is melted must be housed in a separate and well ventilated building, and provided with hoods or cowls, to remove the fumes at the pouring mouths, charging mouths, or above the crucibles, as the case may be. Wherever oxides or other compounds of lead which give off dust are used, the materials must, if possible, be employed in a damp state, or else must be worked by mechanical means in completely closed receptacles, or where this is impracticable, an effective form of dust exhaust must be provided or breathing masks worn by the workers. None of these materials may be handled with the naked hands, but the workers must be provided with gloves of impermeable material, such as rubber, or by means of suitable tools, which must be kept in good order and frequently cleaned. The tables on which the materials are treated must be covered with impermeable material, kept in perfect order, the same applying to the floor, which must slope gently towards a receptacle for the collection of any lead material which falls on to the floor. The latter must be kept moist. Work must be arranged so that there is no splashing, and the tables, floors, and walls must be washed at least once a week. Crushing these lead materials must be performed in special rooms which are well ventilated, and the workers must wear masks if the materials cannot be kept damp. The dipping of pottery ware in liquids containing litharge, red lead, white lead, &c., with the bare hands, is prohibited, as is also the introduction of food or drink into the workrooms. Special working clothes must be provided and kept in good order by the employer, in addition to gloves and masks. In works where the employees are exposed to the risk of lead poisoning, wash-houses must be provided outside the workplaces where lead dust or fumes are given off. There must be a sufficient number of taps, with a plentiful supply of soap and water, and a separate towel, changed once a week, for each employee. Lockers, or other storage accommodation must be provided, and arranged so that the employees' working clothes are kept out of contact with their ordinary clothes. A hot bath or shower bath must be available once a week for each employee exposed to lead dust or fumes, and a similar bath at the end of each day's work for those engaged in emptying or cleaning out the condensing chambers, &c., or repairing the furnaces, in lead works, transporting

white lead, packing red lead into casks, or crushing or dusting-on enamels containing lead.

Employers or their managers must post a copy of this decree in a prominent place in the works, together with a regulation requiring the workers to use the tools, gloves, masks and working clothes provided for them, prohibiting the introduction of food or drink into the workrooms, and calling attention to the necessity for cleaning the hands, mouth and nostrils before each repast, and requiring the workers to use the baths as prescribed above. The following medical attendance must be provided :—A doctor, paid by the employer, to make periodical visits to examine all the workers, and examine all who complain of indisposition arising from their work, or who express a wish to be medically examined. No worker shall be allowed to perform any task in which the handling of lead materials is concerned, unless provided with a medical certificate of freedom from lead poisoning or from any complaint liable to be aggravated seriously by lead poisoning. Such certificate must be renewed in one month after engagement, and once a quarter subsequently. A special register must be kept giving the date and duration of absence of any employee from work through any illness whatsoever ; the dates and particulars of certificates presented in justification of such absence, with the name of the certifying doctor ; and the reports of the regular medical attendants as to their visits. Certain exemptions from the provisions of the decree may be granted by the Minister of Labour, if good cause be shown, and other equally satisfactory measures be adopted for safeguarding the health of the employees, and a certain delay in putting the provisions of the decree into force may be granted where the installation of fresh appliances for carrying out such provisions is in question.

LECTURES ON LEAD POISONING.

ON Nov. 12, at the Royal Institute of Public Health, Professor Sir Thomas Oliver commenced a course of lectures on "Industrial Hygiene." He said he proposed to deal with lead poisoning in the first two of the six lectures. Lead was used in upwards of 100 trades, and no metal was more hurtful to health. In recent years there had been a satisfactory reduction in the number of cases of lead poisoning notified, but the number of fatal cases had not diminished. Lead mining in England was not a cause of lead poisoning, because the ore in this country was almost pure metallic ore. The danger of lead poisoning began in the smelting works, and the most serious danger occurred in cleaning the long underground galleries or flues between the furnace and the stack. Before these flues were introduced the fumes from the stack caused lead poisoning in the cattle on surrounding farms, and the grass would not grow. In the manufacture of red lead a new method had been introduced lately whereby the lead was not handled at all, and he thought there would be a great reduction of lead poisoning among red lead workers in future. Regulations had also been made to lessen the risk of lead poisoning in the more dangerous processes of white lead making which was no longer regarded as work for women. With regard to the potteries, Sir Edward Thorpe and himself had recommended that a large amount of white ware could be made without lead, and if lead was to be used, even for colour work, it should be converted into a compound much more insoluble in gastric juices than lead used in ordinary glazing. They recommended for this purpose fritted lead, formed by firing white lead with silica or boric acid. The pottery workers were now not only working under better regulations, but with a smaller percentage of lead ; and where it was used at all they were using fritted lead. Whether the danger to which house and coach painters were exposed was due to lead poisoning from the paint or to some vapour given off by the turpentine or oils was a matter upon which opinion was not yet settled. White zinc was more suitable than white lead for internal decoration, as it was less liable to change colour, but for external decoration he thought white lead had more covering power and was less expensive. The French Government had notified that in a few months from now no lead was to be used in the external or internal decoration of houses. He was not prepared to give a definite opinion as to how far it would be wise for us to follow that example.

The second lecture was delivered on Nov. 13, when Sir Thomas Oliver said that women were more susceptible to lead poisoning than men. It was a frequent cause of miscarriage and of still births. At the present time in this country women had got to know the effect of lead upon pregnancy, and for a few pence the wives of working men could get from a chemist diachylon, or lead plaster. In some cases their health was injured beyond recovery. They became paralysed in their hands, suffered from colic, severe head-ache, and blindness. The matter was known to the Home Secretary, and he ought to take some steps to prohibit the purchase of diachylon.

The lecturer also pointed out that the treatment of lead poisoning was both preventive and curative. There were no regulations in any other country so good as those of our own Home Office. In the treatment of lead poisoning a new method had been introduced. He gave a rabbit lead in its food, and it became paralysed, but Mr. T. M. Clague, of Newcastle, was able to take the lead out of the rabbit by his electrolytic bath apparatus. The fore part of the animal was placed in one basin and the hind part in another, and there were cushions for it to rest upon. The electric current was then gently turned on. The whole of the paralysis disappeared, and they found lead in the water in the basin. The operation was not painful. It had almost the same effect as chloroform. A second experiment had similar results, but on the third occasion the rabbit took too much lead and died. Those three experiments extended over a period of three years. About three weeks ago they succeeded in removing lead from the body of a workman who had contracted lead poisoning while cleaning flues in a lead smelting works. After three or four baths the vivid blue line along the gums gradually disappeared, and lead was found in the water in the bath and on the electrode. Tremendous stimulus was given to the nutrition of the body, and the man expressed himself as being much better than formerly. If this method of treatment were found to be successful, it would play a very important part in the treatment of lead poisoning. If the lead worker had one of these baths from time to time it would eliminate the lead from his body and postpone his illness. Moreover, the saving to the employer as regarded workmen's compensation would be considerable. They hoped that the treatment would be given a wide trial in the lead-using industries.

Mr. Clague gave a demonstration of the process, and showed that the apparatus was arranged to give the greatest amount of current in such a way that it could be easily borne.



PROTECTIVE SPECTACLES FOR GLASSWORKERS.

SIR WILLIAM CROOKES, O.M., president-elect of the Royal Society, read a communication on the preparation of eye-preserving glasses for spectacles, at a meeting of the Society, held on Nov. 13 at Burlington House. Sir A. Geikie, president of the Society, was in the chair. The paper was the outcome of experiments carried on since 1909 on the effect of adding various metallic oxides to the constituents of glass, in order to produce a substance which would materially lessen injurious results to the eyes of workmen in the glass industry. Sir W. Crookes said the principal object of his experiments was the preparation of a glass which would cut off the extreme heat rays that were so injurious to the eyes of glass-workers in producing cataract, without obscuring too much light or materially affecting the colour of objects seen through the glass when fashioned into spectacles. He had fitted up glass works in his own house and had tried over 300 glasses, out of which he had picked a certain number as being the best to cut off the heat rays. Single metals were at first tried in varying quantities to see if from the colour and properties communicated to the glass they were worth further examination. Each specimen was cut and polished into a plate 2 mm. thick. The plate so prepared was first put into the radiometer balance to see the percentage of heat cut off. It was then tested in the spectrum apparatus to ascertain the upper limit of transmission of the ultra-violet rays, next it was tested in Chapman Jones's opacity meter to see the percentage of luminous rays transmitted, and finally the colour was registered in a Lovibond's tintometer. The following elements were finally selected as likely to be worthy of further experimentation by combining the metals, two, three, or four at a time, in one glass so as to enable the advantages of one to make up for the shortcomings of another :—Cerium, chromium, cobalt, copper, iron, lead, manganese, neodymium, nickel, praseodymium, and uranium. Whilst bearing in mind that the chief object of his research was to find a glass that would cut off as much as possible of the heat radiation, he had also attacked the problem from the ultra-violet and the transparency points of view. Taking each of these desiderata by itself, he had succeeded in preparing glasses which cut off over 90 per cent. of heat radiation, which were opaque to the invisible ultra-violet rays, and were sufficiently free from colour to be capable of use as spectacles. But he had not been able to combine in one specimen of glass these three desiderata in the highest degree. The ideal glass, which would transmit all the colours of the spectrum, cutting off the invisible rays at each end, was still to be discovered. As far as transparency, however, was concerned, it would not be an unmixed advantage for the sought-for glass to be quite clear and colourless. The glare of a strong light on white cliffs, expanses of snow, electric light, &c., was known to be injurious to the eye, and therefore a tinted glass combining good obstruction to the heat radiation and ultra-violet rays was the best to aim for.

Sir W. Abney, chairman of the Glassworkers' Cataract Committee of the Royal Society, said he and his colleagues felt it would be almost an impertinence on their part to say anything but that they most warmly thanked Sir William Crookes for all he had done. Mr. H. J. Powell, speaking in the name of glass manufacturers, said they owed a very great debt to the Royal Society, and especially to Sir William Crookes, for carrying out this most important investigation. The discovery of Sir William Crookes would be of the greatest benefit to workmen in all bottle works and plate and sheet glass works, where the men were exposed to the absolute heat of the furnace.

Sir William Crookes said he was rather disheartened as to the use of his research. He had picked out some of the best glasses that cut off the whole of the heat and sent them to Nuttall & Sons, Ltd., with a request that they would get the opinion of the workmen on them. The foreman expressed approval, but none of the workmen would wear them. "They were not going to wear spectacles," they said; "they could not do any work in them." If these glasses were made perfect he was afraid a law would have to be passed to compel the workmen to wear them; otherwise they would go on suffering as badly as ever.

CANADIAN POTTERY AND GLASS IMPORTS.

CANADIAN imports of pottery and glass during the three months ending June, 1913, according to a return just published, were as follows :—

Earthenware and chinaware :—C.C. or cream coloured ware, United Kingdom, $46,756 ($33,494); United States, $12,576 ($10,926); Germany, $3,570 ($3,316); Japan, $2,021 ($864); other countries, $2,096 ($1,026); total, $67,019 ($49,626).

China and porcelain ware, N.O.P., United Kingdom, $7,566 ($5,659); United States, $2,464 ($4,466); Germany, $1,268 ($2,717); other countries, $453 ($1,134); total, $11,751 ($13,976).

Tableware of china, porcelain, white granite or ironstoneware, United Kingdom, $410,484 ($249,720); United States, $10,524 ($5,881); Austria-Hungary, $16,084 ($19,047); France, $42,511 ($40,644); Germany, $44,320 ($60,375); Japan, $22,796 ($25,918); other countries, $1,419 ($1,541); total, $548,138 ($403,126).

Other earthenware, &c., United Kingdom, $66,108 ($39,974); United States, $129,609 ($102,068); other countries, $6,409 ($7,713); total, $204,326 ($149,755).

Recapitulation, earthenware and chinaware, United Kingdom, $531,114 ($328,847); United States, $155,173 ($123,341); other countries, $144,947 ($164,295); total, $831,234 ($616,483).

Glass and manufactures of balls and cut, pressed or moulded, crystal glass tableware, blown glass tableware, and other glassware, United Kingdom, $12,533 ($10,702); United States, $138,943 ($124,914); Austria-Hungary, $6,719 ($9,804); Belgium, $17,100 ($6,382); France, $3,859 (—); Germany, $11,966 ($11,815); other countries, $3,763 ($7,600); total, $194,883 ($171,217).

Carboys or demijohns, bottles, decanters, flasks, jars, and phials, United Kingdom, $29,780 ($18,885); United States, $138,997 ($117,281); Germany, $24,520 ($18,046); Holland, $3,034 ($4,080); other countries, $1,587 ($10,560); total, $197,918 ($168,852).

Common and colourless window glass, United Kingdom, $149,574 ($107,607); United States, $158,432 ($30,323); Belgium, $194,593 ($188,971); other countries, $1,032 ($2,042); total, $503,631 ($328,943).

Lamp chimneys, glass shades or globes, United Kingdom, $1,474 ($2,421); United States, $89,434 ($81,572); Austria-Hungary, $5,061 ($2,575); Germany, $10,328 ($6,827); other countries, $216 ($736); total, $106,513 ($94,131).

Plain, coloured, opaque, stained or tinted or muffled glass in sheets, United Kingdom, $21,716 ($16,199); United States, $18,014 ($8,844); Belgium, $1,290 ($5,117); other countries, $393 ($342); total $41,413 ($30,502).

Plate glass, not bevelled, in sheets or panes, United Kingdom, $148,953 ($126,913); United States, $16,311

($11,321) ; Belgium, $101,716 ($99,237) ; other countries, $6,692 ($6,701) ; total, $273,672 ($244,172).

Other glass, &c., United Kingdom, $73,177 ($51,943) ; United States, $99,767 ($109,373) ; other countries, $62,894 ($40,083) ; total, $235,838 ($202,399).

Recapitulation, glass and manufactures of, United Kingdom, $437,207 ($334,670) ; United States, $659,898 ($503,628) ; other countries, $456,763 ($420,918) ; total, $1,553,868 ($1,239,216).

The figures in brackets show the imports for the corresponding period of 1912.

THE BRITISH POTTERY AND GLASS MANUFACTURERS' FAIR.

(BY OUR OWN REPORTER.)

AN inaugural luncheon in connection with the proposed "British Pottery and Glass Manufacturers' Annual Fair," which it has been decided shall take place in the town halls of the Potteries from Feb. 14 to 28 next, and the objects of which have already been outlined in previous issues of THE POTTERY GAZETTE, was held in the Assembly Room, King's Hall, Stoke-on-Trent, on Nov. 20. There was a numerous attendance, including quite a considerable number of London and provincial pressmen.

Mr. J. T. Herbert Baily occupied the chair, and the principal guest was His Grace the Duke of Argyll, K.G., K.T., whose advent was heralded by a kilted piper playing Scottish airs.

After an excellent luncheon had been partaken of, the chairman rose to propose "The King," a toast which he said he thought was peculiarly interesting just then, because the great scheme which they were there to advocate was really the outcome of the visit of the King and Queen to that hall in April. He felt that their presence there that day was an evidence of their desire to carry out the injunction of His Majesty to "Wake up England," and he would ask them to drink a "bumper" health to His Majesty.

The toast "The Queen, Queen Alexandra, the Prince of Wales, and other Members of the Royal Family," was also proposed by the chairman. In connection therewith he referred to the honour they felt in having with them His Grace the Duke of Argyll, who was closely connected with that great house which ruled over the kingdom. Her Royal Highness, the Princess Louise, had always taken the greatest interest in everything concerning art, and some little time ago had visited Stoke in order to see a collection of water colours, whilst she had herself risen to great eminence as an artist. He was sure they would all drink very heartily to the health of every member of the Royal Family.

His Grace the Duke of Argyll, who was called upon to propose "Success to the British Pottery and Glass Manufacturers' Annual Fair," met with a rousing reception. He referred to his pleasure in visiting what he called "dear old Stoke" again. It took him back to the time when he was about eight years old, and he came to the Potteries with empty pockets to go back with a cream jug in each. He need not, however, be expected to repeat his ancient habits, because he saw the plate on the table was no longer that of the Potteries, but Sèvres ! He did not quite know whether his idea in taking part in future plans for the success of the Stoke potters was not partially the Home Rule idea of eliminating Sèvres altogether from many banquets and dinners of the future. He took it that one of the main objects of that lunch was that they should take counsel together how best to extend the supply of British wares, in short to everybody, but certainly to keep their own wares on their own tables. This it was thought could best be done by having such an organisation as would enable them to have a display of their wares every year. There was no better place for such an annual show than Stoke-on-Trent, which was within easy reach by rail of good lodgings, and he had no doubt that the North Staffordshire Railway Company would so adapt their trains as to give visitors easy transit facilities in order to reach their lodgings in the big towns of the neighbourhood. Stoke-on-Trent was within half an hour's run from the great railway centre of the Midlands, was easily reached from the Continent by those who wished to see our country, and those from overseas could easily attend the exhibition. If the Romans could export their wares as freely as it could be shown they did, surely with the beautiful wares now produced, it ought to be possible for us to do more, and to keep a whip hand of the markets. He did not think that in Meissen, Dresden, or any of the large centres of Germany they had a more complete organisation than it was proposed to start in the Potteries. He wished them success with all his heart. He believed success was within their grasp, and he would ask them to drink success to their future annual exhibition.

Mr. John Ridgway responded, expressing the view that His Grace appealed to those present very forcibly in that he was a scion of the noble house of Sutherland, with which that district had had so many intimate relationships in times past. His Grace would also appeal to them strongly inasmuch as he had been Governor-General of Canada for four years. Canada was particularly interesting to them, inasmuch as it was the largest market for British pottery outside the British Isles. They all hoped that the Staffordshire Potteries would continue to hold a foremost place in any development of that great dominion in the future. They would certainly do so if only they put half the vigour into their trade that their German rivals were so well noted for doing. The recent visit of the King and Queen had given them a great impetus, and had inspired them to make an attempt to obtain a proper share of the world's trade. He was delighted to see the young men of the industry coming forward in such matters. The geographical situation of the district was an undoubtedly advantageous one, and they had the most skilful body of artisans in the whole world. He believed they had taken a step which, if only followed up as Englishmen knew how to follow up those things, ought to increase their trade very much in the near future.

Mr. W. D. Phillipps, J.P., general manager of the North Staffordshire Railway Company, proposed "The County Borough of Stoke-on-Trent and its Industries." He outlined the remarkable way in which the trade and the importance of the district had increased since the year 1738, the earliest date from which he had been able to get any really reliable information. The population was then 40,000. By 1838, a hundred years afterwards, it had risen to 63,000. At the present time it was a full quarter of a million. Transit facilities were very different to-day to what they were in the time, for instance, of Josiah Wedgwood, whose first trouble was to get his potters' materials into the district and his manufactured goods out. Improvements in transit all dated from the time of Wedgwood. The idea seemed almost ludicrous that the working potter, Josiah Wedgwood, should have been the financier, and the village carpenter, James Brindley, the engineer of a canal, 95 miles long, reaching from the Trent to the Mersey, a scheme which included the construction of a tunnel, 3,000 yards in length and 8 ft. 6 in. in diameter—an unprecedented piece of work in those days. Since the opening of that canal, the trade of the district had enormously increased. It was at that time 40,000 tons a year ; now it was something like 10,000,000 tons, and was in-

creasing at the rate of 1,000,000 tons a year. But in every jampot there was a fly, and the fly in their jampot was the fact that their trade with the United States of America was consistently declining. The zenith was reached in 1895, when they exported 121,000 crates of ware, the value of which was £960,000. Last year they exported only 33,000 crates, and the value was only £417,000. It was evident that some effort should be made to improve their trade with the United States. One of the objects of the proposed fair was to catch the United States buyer on his way to Leipzic, whither the cream of his money had previously gone, and the skimmed milk only been given to the Potteries on his way back.

The Mayor of Stoke-on-Trent, Ald. Philip Elliott, J.P., responded, saying that the Corporation of Stoke-on-Trent were deeply interested in the welfare of the ceramic industry of the district, and would be happy to do all in their power to help to improve it. He would leave Mr. Grimwade, who was to follow him, to refer more directly to the industry itself, but he would like to mention the new Pottery School, which was shortly to be opened, and which he thought would be second to none in the world. In Dr. Mellor they would certainly have one of the ablest teachers in the country. In regard to the museums also, they were endeavouring in every possible way to assist the young students, who would be the future exponents of an industry second to none in the world.

Mr. L. L. Grimwade, J.P., also replied. Unfortunately, he said, he thought they suffered in that district from extreme modesty—supernatural modesty, he might say—and as a consequence they had not held up their hands sufficiently in the markets of the world, but he hoped in future they would not only do that, but would hold out their hats. So far as the United States was concerned, he hoped the tendency to decline would cease with a reduction of 20 per cent. in the tariff, and that there would, indeed, be a great expansion of trade in that market as well as in Canada. Canada was, of course, their largest customer, but there were other extremely important markets. For instance, South America in the aggregate far exceeded Canada. It would be a grand thing if, as a result of the proposed fair, they would have people coming from the Himalayas, the Andes—in fact, from China to Peru—saying, "I know you, because I have seen your wares from one end of the world to the other."

The Mayor of Stoke-on-Trent proposed the toast, "His Grace the Duke of Argyll," and in a felicitous speech thanked the Duke on his own behalf and on behalf of the Council for the honour he had done to the district by his presence, and for the able address he had given them.

His Grace having replied, Mr. J. Wilcox Edge, J.P., proposed a toast to "The Chairman." Mr. J. T. Herbert Baily, responding, reminded the company that, although he held the position of Chairman, a great deal of good work had been done by the Committee, and especially by the hon. secretaries, Mr. Jas. A. Wood and Mr. J. Paterson Brodie. He hoped they would all go away determined to do their best to persuade other manufacturers in Stoke-on-Trent to join the scheme. There were undiscovered markets for their wares, which he hoped would be opened out to them through the Fair. In conclusion he referred to the fact that messages of apology for absence had been received from the Earl of Harrowby, Lord Dartmouth, Lord Curzon, the Duke of Marlborough, and the Marquis of Crewe.

A HANDBOOK to the Fair which has been issued by the Committee contains a list of prospective exhibitors with some elaborate advertisements of their ware. A hotel directory and some illustrated descriptive notes concerning the pottery towns are also supplied. The volume is well printed and neatly bound in paper covers.

THE GLASS AND CHINA DEPARTMENTS OF THE LONDON STORES.

(BY ONE OF OUR STAFF.)

XVI.—STORY & CO., KENSINGTON.

KENSINGTON High-street, as a fashionable shopping locality, needs no introduction here, nor does the high-class furnishing house of Story & Co., centrally situated therein. It must, however, be made quite clear at the commencement of a short article, such as the present one, that this particular house is not by any means to be considered as being in the same category as some of the huge emporiums which are a mark of the West End of London, and whose fame has been secured by merchandising every conceivable commodity for humanity's convenience, from the pin for the button-hole, to the elephant for an easy and jaunty transit. Story & Co. are not given to magniloquent boasting as to an unsurpassable turnover; nor, indeed, is there any really conspicuously outstanding feature in connection with the architectural aspect of their premises which would lead one to imagine that the concern is anything more than—well, a high-class, complete furnishing house. But what a tale might be unfolded as to the quality of the trade that is transacted within its doors! It is in their rôle as select furnishers that the name of Story & Co. has long stood out in the front rank of London trading concerns, and anyone who knows them at all realises that in everything they take up they exercise the trouble to find out and to ensure that whatever they handle is right in style, right in period, right in quality. Story & Co. on their part realise that if an article is a combination of these three qualities from a furnishing point of view, and if also the price is right, and there is effective display, the customer can be relied upon to do the rest. It is probably such dealing as this which has led to Story & Co. being regarded universally as experts in the harmony of furnishings, and it is in the light of this brief preface that our readers are recommended to interpret any later remarks that this article may contain.

If, by anything which the writer may say, the impression should possibly be created that the firm is interested indiscriminately in china and earthenware of every variety, we should indeed be doing them an injustice. Although they have a china department, which has been in evidence for some 17 years—and a really fine one it is, if not a large one—it can only be regarded from certain points of view as an exclusive one, select I ought, perhaps, rather to say. At any rate, it is concerned in the main with articles of pottery having a close alliance with classical furnishings, in which they are pre-eminently interested.

It was with such thoughts as these in his mind that the writer some little time ago waited upon the firm, and made the acquaintance of Mr. R. H. Garton, manager of the department which embraces printed fabrics, china, glass, and fancies. But, as THE POTTERY GAZETTE is just as much interested in the exclusive house as in the most unpretentious shopkeeper on its lists of subscribers, permission to take a photograph was asked, and also to record a few notes concerning the department, a privilege which was willingly accorded.

Passing along the ground floor to get to the basement in which the china department is located, I was first impressed with the magnificent range of fabrics everywhere displayed, and the commendable way in which the china is selected to harmonise with them. In several cases whole services of china were exhibited immediately over a coloured fabric without in any way detracting from the full effect of either. One might think this a very

simple matter, but it neeessitates good taste all the same, and if the ordinary china dealer who has never had oeeasion to handle fabrics doubts the statement, he is recommended to try his hand.

On reaching the basement one is arrested by a magnificent display of ehina and earthenware reading or bungalow lamps, tastefully decorated in many eases in cretonne styles, and to eaeh of whieh a silk shade, painted to match the deeoration of the pottery, is applied. These lamps are fitted either for oil or electric, and the decorations are so earefully and ehoieely chosen that I was not surprised to learn that they form a very good selling line. Other novelties in which one eould not help but be specially interested were sweet lavender and "pot pourri" jars. The lavender jars, whieh are filled with perfume, find quite a ready sale, and one could not help thinking that this is a unique and lively turn of salesmanship.

The writer suggested some time ago, in noticing the features of one of the manufacturer's show rooms, that vases, fitted for electric, were likely to have a good run, and in Story & Co.'s establishment it was apparently possible to discern an indication of the fulfilment of that prophecy. Shades can be painted to mateh these in the same way as for the lamps already mentioned, and Story & Co. have a regular staff of artists whom they employ for this elass of work.

The ornamentals on show were as interesting as they were comprehensive. Whether it was in reproductions of Delft, Chinese, Hispano-Moresque, or Lowestoft, or in the more modern styles of English manufacturers, it was all of a clearly refined character, and this makes it really difficult to choose between one type and another. But there was one table reserved entirely to a reproduction of Delft, which was set out to wonderful effect, and a whole case of reproductions of old porcelain figures was more than usually attractive. There were some capital reproductions of Lowestoft, prineipally in large pieees sueh as puneh bowls, and extremely fine they looked. Some silver-plated ehina, in sueh articles as loving-eups, and teapots, sugars and creams, were also very effective, though I doubt whether they ean be sufficiently appreeiated by the general public—at least, I am inelined to think that they are likely to share the same fate as parian, regrettable as the fact may appear to be. Some Chinese famille rose and famille noir reproduetions by Winkle & Co. also seemed to impress one with having peeuliar merit. Copies of eertain of the Trapnell pieees, whieh some years ago realised sueh fabulous prices, were also to be seen in the room.

In tea sets on trays there was a commendable assortment, and this branch seemed to constitute quite an asset of the department. In this movement the Crown Staffordshire Porcelain Co.'s wares seemed to play a by no means unimportant function. Mahogany as well as wicker trays were employed, and the sets were most attraetively displayed, in some eases in eonjunction with fancy tray eloths. The splashed and veined effeets of the Ruskin and Moore specialities also eontributed largely to the specially fine show of ornamentals.

With regard to the set goods, it will be sufficient for me to remark in a very general way that there was as select an assortment here as in the fancies, and in dinner sets, tea sets, breakfast sets, and so on, there was an ample and suffieient ehoiee to captivate the most fastidious taste. The toilet sets, as would be expeeted, are displayed upstairs amongst the general furnishings.

Imagine, in eonjunetion with what little I have said, an admirable range of eut-glass wares, in whieh there are specialities speeially reserved to Story & Co., and remember also that everything is displayed with all the tastefulness that a West End house ean command, and it is then possible in some measure to eonjure up what this particular china department is like.

In eonelusion, I cannot do better than reiterate what I set out to show at the start, that Story & Co. do not elaim to be all-absorbing in their eapaeity as china dealers. They only elaim to lay themselves out to supply artistic fitments for the beautiful home, and to that section of the public who want to be assured that all the appurtenances of their respective rooms are in strict harmony, as well as being right in period and style, we would say they will be quite safe in placing themselves in the hands of Story & Co., for their salesmen to a man are imbued with the spirit of their profession, and taste and refinement in their case has eome to be "a property of laziness."

STOKE-ON-TRENT TECHNICAL SCHOOLS: PRIZE DISTRIBUTION.

(BY OUR OWN REPORTER.)

THE Annual Prize Distribution to students of the Pottery, Art and Teehnieal Sehools of the County Borough of Stoke-on-Trent took plaee in the Vietoria Hall, Hanley, on Monday, Nov. 24, when Mr. Wm. Burton, M.A., F.C.S., delivered an address befitting the occasion, and afterwards handed the prizes to the sueeessful students. The Mayor of Stoke-on-Trent, Ald. Philip Elliott, J.P., oeeupied the chair.

Mr. Burton, in opening, said he wanted to speak to the young people whom he had eome there to address, as one student to another, for the whole of life was praetieally studentship, and the man who was not continually learning and trying to make the best of his eireumstanees, and derive from them fresh hope for the morrow, was in a very unfortunate and unhappy position. After referring to the wonderful improvements whieh had taken place in the edueational faeilities of the Potteries since he first eame to the distriet some thirty years ago, the speaker went on to say that they stood there at a momentous time in the history of the distriet. The "Five Towns," as they might be ealled, had been united into one great borough, and was to-day one of the most important industrial eentres of this eountry. Now the very same opportunities that had united the towns themselves had also enabled them to unite in a way that was impossible before the edueational advantages that belonged to the distriet. They would shortly see the opening of the magnifieent Pottery Sehool at Stoke-on-Trent, where his friend, Dr. Mellor, would develop still further the extraordinary results whieh he had attained in the training of their young men on the teehnieal side of the trade; a momentous departure had also been made in regard to the sehools of art. At Burslem they had one of the finest loeal schools of art in the eountry that he had ever seen, and when they had their Pottery School at Stoke working in conjunetion with their Central Sehool of Art at Burslem, they would eertainly be equipped with two of the finest schools that it would be possible to have on the teehnieal and artistic sides of any industry.

But the equipment of magnificent sehools was only the beginning of other things. He liked to see the earnest student provided with the finest equipment that could be furnished for him, but probably always the essential thing was the earnest student, and what he wanted to see in this district was a body of earnest students eoming forward to earry on the great traditions of the distriet, both teehnically and artistieally, espeeially in his (the speaker's) own industry, beeause of all the industries that he knew of,

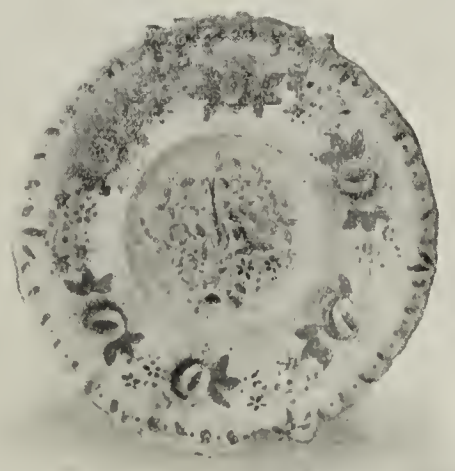
the industry of pottery was unique in this—that it combined in the most remarkable manner all the best that science and all the best that art could teach. They might take any other industry they could think of, and, he thought, they would not find one in which there was the same combination of scientific bases of fact and artistic possibilities of fancy. What was it—he had been asking himself this question for twenty years—that had made the district of North Staffordshire pre-eminently the Potteries of the modern world? They had practically no advantages. All the advantages, if he might say so, had been against them. The one thing that had made the district famous as a centre of pottery production had, he thought, first of all been the enterprise of the employers, and secondly the capacity of the workers. He was never tired of impressing on those who might care to listen to him the importance of co-ordination, co-operation, hearty good fellowship—call it what they might—between the employer and the worker everywhere, if they would achieve the best possible results. And in this district he maintained that in the past, whatever agitators or mere talkers might say to the contrary, some of the very best results had been achieved, because here they had found the most pleasant relations existing between the employers and the workers.

Speaking more directly in regard to the educational facilities now offered in the district, the speaker said he knew perfectly well that some of the manufacturers were rather afraid of the learning that was to be derived from the schools to-day. Take, for instance, the pottery school. A great many of the pottery manufacturers were certainly of the opinion that the pottery school was of comparatively little use unless it would enable the student to compound a formula calculated to cure some specific ill. That was not the function of the pottery school at all. The function of the pottery school was to take in hand those young men who were to become the future potters, and to train them in the sound principles of pottery manufacture, so that when in their future work and life they were faced with the technical difficulties which confronted every manufacturer, he should be able to grapple with those difficulties, reason about them, consider how they arose and how they should best be overcome.

In the same way they might take their schools of art. It was perfectly certain that a great many manufacturers were hostile to the schools of art because they had the idea that the first result of a school of art should be to produce a man who could design a good selling pattern. But that was not its function. Its function was to take hold of young men and women who had artistic impulses, and to train them in the sound principles of design, colour, and taste that had been the foundation of the schools of art in the past. The function of the school of art was to teach these students how to apply the lessons they had learned in the past to the needs of to-day. But the needs of to-day were not necessarily to produce patterns that would sell, but to produce good, sound, useful patterns designed in harmony with the materials to which they were applied, and to the purpose for which they were to be used. The respective schools were undoubtedly becoming a good deal more practical than they used to be. It seemed to him that they were becoming more practical, because they had endeavoured far less to teach in the schools what could only be taught on the works, and they had confined themselves to teaching in a most practical way what could be best taught in the schools. Now undoubtedly what was taught in the schools were largely the guiding principles which underlay science, technology, and art. In the works they had the practical application of those things, and if their student, whether it be the student of science or of art, had not been properly trained in the school to deal with first principles, then they might depend upon it that that student when he went to work in the industry would be a failure. The same conditions that made one a good student would make one a good worker.

The speaker went on to say that he was most anxious that any kind of antagonism, whether real or fancied, which existed between the employers of labour and the schools should cease. The Staffordshire manufacturer had long been of the opinion that the less other manufacturers knew of his particular process the better, that he had certain formulæ of his own that were of infinite value to him, and therefore it would be most unfortunate for him should some of his workpeople begin to attend classes, and talk about what they had learned on his particular works. To-day, however, he (the speaker) thought they were in a fair way of reversing that position, because it was perfectly certain that in their schools they were in a position to teach the young people from the factories things which the factory could not teach them at all, and though they had in that district developed their factories on strongly individual lines, the day when that alone would suffice had already gone.

What was sufficient to establish North Staffordshire as a great pottery centre in the eighteenth century was not sufficient to-day. Other nations who had great pottery centres had embarked on a course of scientific and technical training for their workpeople, and it behoved the people of North Staffordshire, if they wished to maintain the position they already occupied, to follow suit. It was not sufficient for the manufacturer to say, "I will imitate this pattern or that pattern, this style or that style," for the whole world was becoming their market, and in order to be able to cater for this world market they must be able to supply everybody with the goods which he was prepared to buy. It was essential, therefore, that they should train their young people to make good, sound bodies, and good glazes to suit them, also how to fire and all the rest of it—such things as they might learn in their new technical school of pottery—and, in addition, and beyond all that, they must have them trained to decorate that pottery with good designs, which were themselves artistic, telling, and, should he say, English? The English manufacturers had too long gone on copying Chinese and other Oriental patterns and styles, or, it might be, French. But the time was coming when they might have an English type of pottery of their own, and an English style of decorative art. It was because he saw these things coming that he wanted the manufacturers of that district, as of every other district, to support the schools that had been established in their midst, and it was because of this also that he had come to say these few words to the students and to distribute their prizes.



THE POTTERY AND GLASS TRADES' BENEVOLENT INSTITUTION.

(BY OUR OWN REPORTER.)

THE Annual Festival Dinner of the Pottery and Glass Trades' Benevolent Institution was held on Tuesday evening, Nov. 18, at the Whitehall Rooms, Hotel Métropole, London.

The Chairman was the Most Hon. the Marquis of Crewe, K.G., P.C., who was supported by the Right Hon. the Earl of Harrowby (President of the Institution), the Trustees, Mr. Jules Wuidart (Belgian Vice-Consul), Mr. J. S. Williams-Thomas, J.P., and Mr. H. M. Robinson (of Mintons, Ltd.) in the vice-chair. The other vice-chairs were occupied by the Chairman of the Board of Management (Mr. Charles E. Green), the Vice-Chairman of the Board of Management (Mr. Congreve Jackson), the Chairman of the Festival Dinner Committee (Mr. Ernest Goode), the Chairman and Vice-Chairman of the Potteries Committee (Mr. R. Shenton and Mr. W. Rhodes), the Chairman of the Glass Districts Committee (Mr. W. H. Stuart, J.P.), and the Secretary (Mr. J. G. W. James).

Over 200 of the leading manufacturers, wholesale and retail merchants, and others associated with the pottery and glass industries, were present.

The guests of honour were :—Alderman F Geen, J.P. (Deputy Mayor of Stoke-on-Trent), Mr. J. W. Stanley Burmester (the Master of the Glass Sellers' Co.), Mr. R. L. Outhwaite (M.P. for Hanley), Mr. S. Hirst (President of the China and Glass Dealers' Association of the United Kingdom), Mr. F. E. Spiers, Mr. Wm. Burton, M.A., F.C.S., and Mr. A. Marriott Powell.

The Loyal toasts having been honoured, Mr. J. S. WILLIAMS-THOMAS, in the absence of the Mayor of Stoke-on-Trent, rose to propose "The Houses of Parliament." They would, he said, all be delighted to see with them that night their noble Chairman, the Earl of Crewe. It was not necessary to say anything about his qualifications. They all knew the important position that he held in the Cabinet, and they were aware of the great good that he had done in various ways since he had held that office. Then they had also with them their President, Lord Harrowby, who had done so much to further the interests of their Institution, and their friend from the Potteries, Mr. R. L. Outhwaite, who represented a section of a great body in the House of Commons. They would have liked to have seen other members of Parliament with them that night. For instance, last year they had with them the Hon. J. C. Lyttelton, Sir Arthur Boscawen, and their Member for the Kingswinford division, as well as Mr. John Ward from the Potteries. But these gentlemen were otherwise engaged at the present time. However much the company present would have liked to have seen them there with them, they could only regret their absence, and say how glad they were that the House of Lords and the House of Commons were so well represented by those members who were present. They would all appreciate the great services that these gentlemen rendered to the State. He was not allowed to allude to any party question, and for that reason he would be rather limited in what he had to say. At least he would say that he believed that these gentlemen all acted conscientiously and did what they thought was right to uphold the dignity of this great nation. Some of them did not quite agree with their views, but if they were all of the same opinion the country would be a very milk-and-water one. Now the glass-makers and the potters, he knew, felt at times that they were very hardly dealt with. They had legislation which at the time they could not see the benefit of, that imposed additional expenditure upon them apparently to no real purpose, but they often found that in the long run the Government had been wiser than they. Now many things in the Potteries had been brought about lately which had no doubt helped to benefit the health conditions of the working classes. They had also had many measures brought forward for the better ventilation of the workshops and the lessening of evils. He did not think that the manufacturers were desirous of carrying on an industry that was going to seriously affect the health and happiness of their operatives. He for one would be very sorry indeed to be a party to any injurious work being carried on at his works. What they had to be careful about, however, was that they did not have over-legislation. They must not shut their eyes to the fact that they had to compete in the world to carry on their industries successfully. They must not be burdened and weighed down by expenses and restrictions which would limit them in meeting foreign competition. They wanted to have all their working classes labouring under the best possible conditions, and they had to trust to their Members of Parliament to legislate in such a way that whilst benefitting the masses they did not ruin their industries. We, as an English nation, had a high reputation with regard to our pottery ware and our glass ware. And he said this, and said it advisedly, that these industries must not be regarded as ordinary common industries, but rather as a technical school for our young people. Restrictions must not be imposed such as would prevent young people from joining an industry until they were of such an age that they could not learn the trade as easily as their forefathers had been able to do. Ten or twelve years of age, as was then the standard, was certainly too early, but now legislation was contemplated which would prevent boys going to work until they were 16 years of age, because they happened to work by turns, six hours on and six off, with intervals for meals and a total working week of about 40 hours. The glass trade and the pottery trade were in themselves technical trades, and the various manufactories had their own special apparatus, which it would be impossible to have at the technical schools. One, of course, believed in such institutions, but they should be carried on without crippling any industries. Many of the connecting links between the elementary and the technical schools, or the continuation classes, could be made compulsory without in any way interfering with those industries where there was a technical education already carried on. He was anxious that our Members of Parliament should see that they as manufacturers, whilst wishing in every way to help them to frame and to further useful legislation, were, at the same time, anxious that they should not be hampered in their industries by the imposition of new Acts which would prove detrimental to them. In proposing the toast entrusted to him, he would couple with it, with great pleasure, the name of the member for the Hanley Division, Mr. Outhwaite.

The toast having been accorded, Mr. R. L. OUTHWAITE, M.P., responded. He was, he said, both unaccustomed to making an after-dinner speech, and a speech which should be entirely devoid of controversy. The only support he had was that which he got in reading a book by the founder of French syndicalism in which he found the remark that a Member of Parliament need know nothing, but he must appear to know everything. The proposer suggested that in some directions they were over-legislated. Well, he found himself rather in agreement with that view. He thought that the chief justification for Parliament in these days was to undo many of the laws that had been made in the past. He thought there was a great sphere for the legislator to-day to undo laws instead of making fresh ones. He felt that the Potteries, for instance, and the industries of the Potteries, were peculiarly burdened. He had talked to manufacturers of other districts, and they had wondered how the manufacturers of the Potteries could stand up against, for instance, the extortionately high rates—high railway rates, high canal freights, high charges in all directions. He happened to know this : he was down in a clay-producing district not long ago, and he was told that it was cheaper for them to send clay to the German manufacturers than to English manufacturers. We had better look to those tariffs levied in our own country, and try to get some relief from them for the stimulation and the unburdening of industry.

Ald. F. GEEN proposed the toast "The Pottery and Glass Industries." He said that to him, as a public man, resident in the Potteries, the pottery industry was of considerable importance, and he knew that at a gathering of that kind the toast would receive their very hearty approbation. The pottery industry had during the past year or two been in a very prosperous condition, generally speaking, although he was perfectly well aware that in many directions the profits had not been nearly what they ought to have been, and what the employers were entitled to. At the same time they were always very happy to know that there was plenty of trade, and that their people were constantly and regularly employed. During the early part of this year the Potteries received a very important mark, not only of respect on behalf of their Majesties the King and Queen, but that visit stamped the district as being one containing perhaps the most loyal people the King had under his rule. Their Majesties not only saw the people, but inspected their productions, and the noble Marquis had assured him (the speaker), and their Majesties assured him, too, at the time, that they were highly delighted with all they saw. That royal visit had proved to be of very considerable value not only to the manufacturers, but to the workpeople as well. There was a time when newspaper representatives thought it to be the right and proper course to pursue to write of the district as though it were almost as bad, or worse, than any other in the Empire. But they had learned that such was not the case. They knew now, after visiting them as they did on the occasion of the royal visit, how to recognise that the Potteries possessed a highly skilled artisan population, who were capable of producing the choicest and finest pottery, and he had not the least doubt that the glass workers were as able and as clever as the pottery workers. He trusted that trade would continue to be good, and that the profits for the manufacturers, and the wages for the people, would be good. Last year he referred to the expense that the employers were likely to be put to under the new Home Office regulations. He was not going to mention that again, because he was very fortunate in having the privilege of coupling with that toast the name of Mr. William Burton, who would, he had not the least doubt, speak, as he always did speak, with directness in matters of this kind. He (the speaker) would like to mention that in connection with the display of pottery on the occasion of the royal visit that they had in a few days something like 8,000 to 10,000



FESTIVAL DINNER OF THE POTTERY AND GLASS TRADES' BENEVOLENT INSTITUTION, NOVEMBER 18, 1913. [*Photo. by Fradelle & Young.*

people through the King's Hall, and he made a profit of about £180 from that Exhibition. He had sent £100 of that to the N.S. Infirmary, and had divided the balance of £80 equally between the Haywood Hospital and the Longton Cottage Hospital. He was quite sure that all the gentlemen present, interested as they were in the pottery industry, would be pleased to know that the exhibits drew so large a number of people to view them, and that the financial result was so eminently satisfactory. He had been extremely pleased to be present, and he regretted, as he knew his successor regretted, Ald. Philip Elliott's inability to be present at the gathering. At the last moment an important appointment intervened which he was obliged to keep.

Mr. William Burton, M.A., F.C.S., in responding, said that that was the most unusual honour that had ever fallen to his lot so far. For more than fifteen years he had been accustomed to fighting for the pottery manufacturers of this country in various capacities; but this was the first time that he had ever been asked to a convivial gathering, and that his name had been coupled with the toast of the prosperity of the trade. Unaccustomed as he was to public speaking (laughter) in this capacity, for this was the first time that he had ever performed such a function in his life, he naturally found it very difficult to know exactly what to say. Undoubtedly the pottery trade during the last year or two had experienced a time of reasonable prosperity, which, with the new spirit that was animating the trade, he hoped and believed would continue, because in the thirty years during which he had been connected with the pottery trade, since he first went to Messrs. Wedgwood's as their chemist, he had seen a tremendous development of the potter's art in this country. For more than a hundred years the English potters had undoubtedly been the manufacturers of the best ordinary domestic earthenware and china that the world had ever seen. People very seldom reflected that to-day, owing largely to the industry, the enterprise, and the skill of the Staffordshire potters in the eighteenth century, and in the early part of the nineteenth century, the common man to-day, the quite ordinary person, could have and did have on his table and for every purpose of domestic requirement far better utensils than the kings and nobles of even the eighteenth century could have, and that achievement which he claimed was no light one, had been entirely brought about by the enterprise and the methods and the organisation of the pottery industry of this country, because the methods invented by our forerunners, the potters of the past century, had undoubtedly paved the way for all the modern improvements in pottery manufacture in the European countries, and in the United States of America. The methods in use there to-day were English methods. They were discovered or invented and perfected largely by English workmen, and most of all by the workmen of Staffordshire. Of course, he might say that, because he was not a Staffordshire man. And, now, when we looked at what happened, and saw the enterprise of those who were responsible for the conduct of this very important industry, an industry which still remained tremendously interesting, because it combined in the most remarkable way the achievements, both of science and of art; they were impressed with the fact, he thought, that it had succeeded because of English practicality; it had succeeded not by the favour of kings or princes or great nobles; it had succeeded because it had met the general demands of the common people. The great pottery industries of every other European state owed their origin to the patronage of their kings or princes. In England they, he ventured to say quite respectfully, had never experienced anything of the kind. Whatever they had had, they had earned it by their own brains and their own skill. He had the greatest pleasure in saying this before some of his friends who distributed the wares that they manufactured. They had sometimes felt two things with regard to the prevalent taste in England; the first was the absurd importance that was attached to antiquity and the second was the ridiculous importance that was attached to a foreign name. As Englishmen they were commonly accused of having a very good conceit of themselves. As a matter of fact, he thought they were far too modest in matters artistic. Two centuries ago it was said of English painting that no English painter need apply for the patronage of the English Court, and that was absolutely and perfectly true. At the present time our gracious king had removed that reproach from the ceramic industry at all events. By his most patriotic action in visiting the great centres of industry, he had given an impetus to their development. When the news of that visit and of the consequences that followed upon it were telegraphed all over the seas, to our fellow-citizens of this great Empire, and to every country in the world, there came again a fresh demand for English pottery. Now he was one of those unfortunate people in the pottery trade who still remained an ardent free-trader. There were no politics at this gathering, and therefore he could not be accused of not being anxious to see French and German and other Continental pottery in this country; although he did not see why it should have been used at their dinner that night, by the way. He did, however, think they had a right to ask of their own English people that they should consider on its fair merits the artistic qualities of the goods the English could and did produce every day of their lives, not as a mere tour de force for international exhibitions, but in the ordinary way of their business, and quality for quality, either technically or artistically, he claimed that they could and did produce pottery that was superior to that made by any other civilised nation at the present time. And if he might say a word for his friends from Staffordshire, he thought those gentlemen present, and whom he was very proud to meet, who represented the great distributing houses, should bear that a little more closely in mind than they did. Seeing that he had been concerned for so many years in fighting the Government, by which he meant, of course, the great governmental departments like the Home Office and the Board of Trade, who had to regulate the way in which they conducted their industries, it seemed to have been expected that he should say something against the Government. Well, as a matter of fact he thought the Government had had quite enough said against it. After all, any industry must be continued in a spirit that was in harmony with the spirit of the times. It was no use potters complaining of restrictive legislation, if it could be shown that their processes or their methods had in the past been inimical to the well-being and the comfort of their workpeople. It was very hard for those of them who had cared for their workpeople—and he was proud to say that the firm whom he represented had always done so—to be charged with being practically commercial manslaughterers, and those were the sort of phrases used against them because of those unfortunate occurrences of plumbism and other diseases which would arise in this and other industries. But this was not the way in which things were to be put right. All of them to-day, whatever their rank or calling, inherited certain failings from the past, and they potters inherited a lack of knowledge—not a lack of intention; the intention was good—a lack of knowledge of how to deal with the harmful dust and the injurious lead, which were necessary evils of their industry. That was the problem still before them. People in the press, and speakers in Parliament, if he might say so, often wrote and spoke as if people would live for ever if they did not engage in the pottery trade. Well, unfortunately, none of them would live for ever. As an industry they were not, and never had been, unmindful of the well-being and the health and the comfort of those who worked for them. The potters it was who had to carry on the industry, and they knew far better than some of their critics from outside who never conducted anything in their lives bigger than an afternoon tea, or something of that sort, what it meant to conduct an industry, with all the warring elements of employer and employed, with fairness, with justice, and with a true sense of what was due from one man to another. Now he claimed for his trade that they had always tried to do that, and when any of those gentlemen who were not in the industry read in future those diatribes in the press as to how they killed their workpeople and so forth, they might take it from him that it was an absolute falsehood. The figures were there to show for themselves. Their industry was not one of the worst; it was one of the best in its influences on the health of its workpeople. If the figures proved anything at all, they proved that; and, speaking as chairman of the Potters' Insurance Co., which for many years had charged itself with the incidence of lead poisoning of its people, he was thankful to say, as they would be glad to hear, that not only had the number of cases diminished, but the severity and importance of the cases diminished continually also. He thanked them all very heartily for the way in which they had received this toast, and for coupling with it the health of himself.

Mr. A. Marriott Powell, who also responded to the toast of "The Pottery and Glass Industries," explained that he felt very much out of his element because, as most of his hearers would be well aware, the firm with which he was connected manufactured at Whitefriars in the City, and following the example of centuries of working on the same premises, they still sold on the premises to the actual user the goods that they actually manufactured, and they therefore came but little into contact with "The Trade." He had been given the tip in addressing them for the first time, that it was the annual opportunity of laying before the members of both Houses of Parliament questions which affected their industries. Now it had always seemed to him rather curious that in this country, which used to be called the workshop of the world, all public opinion and most of the legislation necessarily based upon that public opinion, had always trended rather noticeably in the direction of considering all questions from the point of view of the consumer rather than from the point of view of the producer. He would not follow that argument further because it was a matter of immediate practical politics. But he would like to point out with regard to their own particular industry at Whitefriars, where they tried to be artists rather than mere workmen, that if they were going to restrict the age at which a boy began to learn their art till the time he was sixteen, it was, he thought, not quite unanalogous to saying that they ought to have restricted a man like the President of the Royal Academy and have told him that he was never to touch pencil or brush until he was sixteen. His (the speaker's) opinion, for what it might be worth, was that if they were to educate the rising generation as he thought it should be educated, they must educate each class for its particular work in

life, and they ought not to educate the glass blower to be a little office boy in a black coat and teach him all sorts of things from Shakespeare to the piano. They should rather apprentice him as early as possible to a trade in which he had to acquire the idea and feeling of line and shape and colour. He (the speaker) was quite sure that so far as their own works were concerned, if they were going to restrict the age to sixteen, their product would fall off in its artistic nature, and, so far as he knew, every single one of their glass blowers was in sympathy with that sentiment. The Governments of the past had not to his mind done particularly much for producers of this country; but they had at last begun in a small and tentative way so far as the glass trade was concerned. The speaker cited the classification of exhibits which had now been arrived at in international exhibitions, whereby artistic glass and pottery were now shown in a class which befitted them, instead of as previously alongside drain pipes and other similarly prosaic products. This was a step in the right direction. Amongst other matters which were referred to in the course of Mr. Powell's speech was the question of a periodical national exhibition of modern china and glass. Did it not seem strange, he said, that whilst an international exhibition of modern British arts had been arranged abroad only this year there were no facilities at home? This was a matter which he thought he might do well to mention in the presence of representatives of both Houses of Parliament. Finally, the speaker referred to a code of commercial morality which it was felt should exist throughout the whole of the allied trades. It was only the observance of a high code of commercial ethics which would ensure every manufacturer having a fair field. He was glad to be able to respond to the toast which concerned their mutual trades.

The Marquis of Crewe rose to propose "The Pottery and Glass Trades' Benevolent Institution." He said it fell to his lot as Chairman to propose, if not the toast of the evening, what might at any rate be regarded as the central toast of that dinner. He would ask them, before he sat down, to drink to the prosperity of the Institution. That Institution had been in existence now about thirty years, and during that time it had distributed in the various benefits which it allotted to different classes of persons a sum of not far from £10,000. That was no mean record, all the more because its beginnings were not large. It began, as he understood, as a society for the benefit of the wholesale and retail traders in pottery and glass, first of all only in London. Since then its operations had been greatly enlarged, and in one form or another now covered the whole of the kingdom. There were now various principles and various methods by which benevolent work of this kind might be carried on—benevolent work, to assist those who in some cases might have gone under in the course of their connection with a particular trade or industry, or at any rate sustained trouble and misfortune while carrying it out. In some cases the power and assistance of the State was alone relied on for rendering that assistance. In some other cases, charity—the benevolence of the wealthy—was the sole source of that aid. In a great many other cases, as they all knew, there was neither State help not charitable help, but assistance was rendered by the subscriptions of those who were engaged in the industry on the mutual principle. And there were, of course, all manner of combinations and permutations in which these different systems were sometimes blended together. In some countries, for instance in France, the system of public aid depended upon a blend of State assistance and private charity, both as regarded the funds provided and the work rendered, and blended in a manner which, for one reason or another, we had never attempted in this country. Then, as they knew, the assistance of the State and the mutual principle were combined for the purpose of insurance, pension, or whatever it might be called. Now this Benevolent Institution went on a different plan. It was not a benefit society, it was not a trades union, it was not an insurance society; but it combined together two of the plans and principles which he had mentioned, viz., that of a certain dependence on the benevolence of those who were able to subscribe to its funds, combined with contributions from those who would, or in some event might, receive the assistance which the society offered. That was in some ways not the usual principle in the conduct of benevolent institutions of this country, and its existence and its success in this particular instance pointed, he thought, to the important consideration that in these matters it was well to study variety, not to depend too exclusively upon State assistance or compulsory contributions, not to depend too exclusively on the mutual principle, or the bare subscriptions of those who might at some time wish to benefit, and not to depend too exclusively on the benevolence of the wealthy. So far as this particular Institution was concerned, it seemed to him that the principles on which it was conducted were well suited to the character of the industries concerned. They had heard that night in more than one speech, and heard very truly, that what distinguished these industries of pottery and of glass making from many others was the fact that they were in essence craftsmen's industries, and therefore, to adopt, as this Institution had done, plans which to some extent reminded one of, and were certainly by no means unsuited to, mediæval guilds, the study of which was so interesting, appeared to him to be a wise method of dealing with the problem of possible distress in relation to these particular trades. He thought it was reasonable to bear in mind that the spirit of craftsmanship that belonged to the potting industry and the glass industry not only affected those who were actually responsible for design nor even those so marvellously skilled in both these industries in regard to actual manipulation of materials. But the sense of belonging to a craft must, he was sure, also spread to the retailers, the travellers, and the salesmen, who were concerned in the distribution of these products. That being so, he was glad to think that it was on the craftsman's principles that this Benevolent Institution was sketched out. Now, as he had said, this Institution was at first of narrow scope, but that scope had greatly widened, and it had widened in, he ventured to think, a most rational and desirable way by the localisation of committees at the centres of the industries, whereby the needs of individuals could be more closely studied and better understood than was possible to a great central organisation meeting in London, at considerable distance from the industries themselves. He felt certain that that alteration must have been regarded by everybody as a marked step in advance, and that it would tend, not merely to the increased usefulness of the Institution, but also what, of course, was most important, to its greater popularity. Such a procedure was all the more necessary, of course, because of the thoroughly flexible methods upon which, as he understood, its charity was conducted. In the case of great State systems of benevolence it was obviously necessary to have hard and fast rules; hard and fast rules must also be applied to the great benefit societies which depended upon the contributions of the members. But in this particular case, and on the lines on which the work was done, some considerable flexibility was possible, and he had no doubt was wisely exercised; that was to say, cases of special misfortune, special hardship, continued illness, and loss not due to the fault of the sufferer, were, in such an institution, met on a larger scale, and in a more liberal spirit than was possible to the more rigidly framed organisations of which he had spoken. Now he hoped that this being so the manufacturers engaged in those industries who had supported the Institution from the first with great liberality, would continue to do so, and that if there were any firms who did not at present take part in its operations they would add their names to the subscription list. The question, however, was by no means only one of amount of money subscribed; a most important thing in a society of that kind was to interest as many people in it as possible. He hoped that the small retailer and the trader all over the country would show a desire to give at any rate something—it need not be much—to the general fund, and also that every effort would be made to induce those workmen and others actually engaged in the operations of the trades to join and pay their 5s. It ought, of course, to be made absolutely clear that there was no intention on the part of an institution of this kind to enter into any sort of rivalry with national institutions of insurance, with trade unions or with the great benefit societies. But a little examination of the whole subject would show what, indeed, was familiar to all who had studied the question, that there was no society, and no national system which covered all the ground and dealt with every case. Such extreme cases fell to the consideration of those who were responsible for that Institution.

The speaker went on to endorse what Alderman Geen had had to say about the visit of the King and Queen to the Potteries earlier in the year, and also to refer to the Pottery Fair which it has been decided to hold there next February. Concluding, he referred to the advantages which the Five Towns should ultimately reap from Federation. By that Federation they could fairly claim that Stoke-on-Trent now ranked in all respects with the great industrial centres of this country. He looked forward to seeing it increase both in size and in prosperity in the years to come. In proposing the toast, he would couple with it the name of Mr. Chas. E. Green, Chairman of the Board of Management.

Mr. Chas. E. Green rose to respond. He said that he could hardly say how proud he felt at being Chairman of the Board of an Institution of which his father was one of the founders over thirty years ago, and no one would have been more gratified at the position the Institution now held, had he been alive and present that evening; he would also have seen the largest and most representative gathering ever brought together in the pottery and glass trades. These annual dinners, which were only started five years ago, were intended to serve a double purpose; one, to bring together in social intercourse as many members of the trade as possible; another, to more largely bring the subject of the Institution before the trade, and make it an occasion for appealing to the generosity of all those associated with these industries. That the idea was a wise one has been more than demonstrated. At the first dinner 90 were present; the following year, 131; the next, 159; last year, 178 sat down: on this occasion, 208, the tables being filled to their utmost capacity, and not only that, they might have accommodated a few more had they known in time, but the application for tickets was made too late. He very much

regretted that this should have happened, but the Committee certainly could not be blamed for it. Anticipating that a very large number would wish to be present on that special occasion, the Dinner Committee in their circular announcing the dinner, asked particularly that early application should be made for tickets. This was unfortunately not observed, and he hoped in consideration for the difficulties the Committee have in arranging a dinner of this magnitude, that those present who he hoped would be present next year, would, if possible, apply for their tickets at least a week before the date of the dinner. This had been a very eventful year for the Institution; it had had the greatest honour that could possibly be conferred upon it, His Majesty the King having become Patron. Again, one of England's best known peers was presiding at the dinner, Lord Crewe, who acted as host to their Majesties when they visited the Potteries in the spring. Although not a resident in Staffordshire, his beautiful estate—Crewe Hall—was only a few miles from Stoke, so, like their President, Lord Harrowby, he had large interests in the district. These two facts alone should be of great value to the Board, as they showed conclusively that the Institution was necessary and doing good work, and should be an indisputable argument to all those connected with the trade who, up to the present, had done nothing to support it. He must refer to the work of the Institution during the past year, and asked for indulgence for facts and figures, but one must not forget the thousands interested in the pottery and glass trades who had not, like themselves, the advantage of being present at the dinner, and who would turn to their trade journal in order to read a report of the proceedings. The membership this year had increased by 107—83 5s. and 24 10s. 6d.—and 21 subscribers had been added, the total membership being 852 as against 340 in 1910. Although this compared favourably with previous years, yet it was altogether inadequate considering the advantages offered for such a small yearly subscription. Were the Institution properly understood and appreciated by the workers in the pottery and glass trades, he did not think there would be many cases of distress that it would not be called upon to relieve. The Board would feel that they had achieved what they set out to do, if this were ever possible, but it could only be brought about by advertising the advantages of the Institution and increasing its membership. It seemed incredible that anyone eligible to become a member should not avail themselves of the opportunity, when, for 5s. a year, in case of necessity an annuity of £25 is granted, or, in the case of widows of members. £15; temporary relief in either lump sums or weekly payments of 10s., up to £25 a year; also the care and free education of orphan children. In addition to this, there was the advantage of the Employment Bureau, which alone was worth the subscription, as it enabled all those seeking employment to make use of the Institution without any further charge. The Board at the next annual general meeting in January, would recommend an alteration in the rules, which will be of considerable benefit to all employees. In connection with the donations he should like, on behalf of the Institution, to particularly thank Harrods, Ltd., who, through their managing director, Mr. Richard Burbidge, had given the magnificent sum of 125 guineas. In addition to this, they allowed the Institution to place collecting boxes in their china and glass department during the exhibition of china and the collection presented to the Queen by the manufacturers during the visit of their Majesties to the Potteries in the spring. This should be a good example to all other large departmental houses in London and the country. They would also notice a donation of five guineas from "Millicent, Duchess of Sutherland, in memory of the late Duke." The great interest the Duchess had always taken in the Potteries and its workers was too well known to need any comment from him. Besides the two donors already mentioned, Mr. Green referred to De Grelle, Houdret & Co., who had already given the Institution two donations of 25 guineas, and had now promised to become annual subscribers for this amount. He was sorry to see that there was still a large number of important manufacturers and retail houses whose names did not, and never had appeared as donors or subscribers to the Institution. He hoped that something, or someone, would make them see the error of their ways, that they owed a duty to the trade in which they made, or tried to make, their living, and that one of the duties is to support the only Institution of its kind directly connected with the pottery and glass trades. Unfortunately one could rarely have gains without losses, and this year death had carried off several very prominent men connected with the trades, amongst others Mr. R. P. Copeland, late President of the Institution; Mr. H. Spencer Daniell, late treasurer; and Mrs. Ronald Doulton, who, with her family, almost from the start of the Institution, helped them so much directly and indirectly. They felt the loss especially in the absence of Mr. Ronald Doulton and his son Orrok that evening. He would like, on behalf of the Board of Management, to thank Lord Crewe for presding, also Lord Harrowby for the splendid work he had done during his Presidency. It could not be said, as was often the case with other similar institutions, that their President was simply ornamental, for he was a hard worker, and in spite of the number of calls he had upon his time, was always ready when called upon, both with his advice and assistance. He would also thank Mr. Robinson, of Mintons, Ltd., for taking the vice-chair; and Mr. Ernest Goode, of Thomas Goode & Co., for acting as Chairman of the Dinner Committee. The example of these two, who were representatives of the finest houses in the trade, manufacturing and retail, should be an incentive to others in the future. Then, again, he would thank the Press for helping the work of the Institution by freely bringing it to the notice of the trade whenever an opportunity arose. He would also tender his thanks to the Pottery and Glass District Committees for the work that they had done during the past year. Their usefulness was very marked, and saved the Institution a considerable amount of time and money: should any urgent case for relief arise in their district, being on the spot, they could thoroughly investigate it, and if necessary grant temporary assistance. Last, but not least, he had to thank the Secretary of the Institution, Mr. James, for his indefatigable work, especially in connection with this dinner. His experience had been of very material assistance to the Board, and the steady expansion of the Institution was very largely due to his efforts.

The next toast, that of "The Visitors," was proposed by Mr. Congreve Jackson. He referred in special terms to the visit of Lord Crewe, which marked the first time that the Institution had been honoured by the presence of a member of His Majesty's Cabinet. The excellent example he (Lord Crewe) had set that night would, he was convinced, result in the Whitehall Rooms in future becoming the recognised and favourite resort of Cabinet Ministers. He (the speaker) regretted not being able to welcome the Mayor of Stoke, but he was glad to be able to welcome Alderman Geen again, this time in his private capacity. It was natural that a special welcome should be extended to the Master of the Worshipful Company of Glass Sellers, and he could assure Mr. Burmester that there was ample scope at the present time for the activities of his ancient Guild. They had hoped to have been honoured by the presence of Lord Stamfordham and the Rt. Hon. Sir Wm. Carrington, and the interest shown in the Institution by gentlemen occupying such high positions in His Majesty's household was a proof of the interest of His Majesty in the welfare of the Institution. Unfortunately, however, they were unable to be present. The mention of His Majesty in connection with this toast reminded him of the splendid advertisement which the Potteries recently obtained through the Royal visit. He congratulated his friends from the Potteries on the result, though, he must admit, those congratulations were not quite untinged with envy, and he hoped that in any future itinerary of the Midlands which their Majesties might make, the glass-making industry might not be forgotten. It was true they had not five or six town halls in which to display their productions, nor could they boast in South Staffs. of the salubrious air which the Potteries were so justly famous for, but at least they could promise that their Majesties would receive as hearty and enthusiastic a welcome from the glass-makers of Stourbridge. He regretted that amongst the absentees were Lord Dartmouth, Lord Lytton, and the High Sheriff of the County of Staffordshire. They especially regretted the absence of that old and tried friend of the Institution, Mr. Ronald Doulton, and they must offer their respectful sympathy to him in the cause which had prevented him from being present. Last, but not least, they regretted the absence of those members of Parliament whom they listened to with so much pleasure last year. In that room they knew nothing of politics, and they could only conjecture the reason which had prevented those gentlemen being with them that evening. Anyhow, they would hope to be more fortunate on a future occasion. The toast "The Visitors," coupled with which were the names of Mr. J. W. Stanley Burmester and Mr. Samuel Hirst, was then put and heartily drunk.

Mr. Samuel Hirst, President of the China and Glass Dealers' Association of the United Kingdom, in responding, said that although he came on late in the toast list he felt that he represented not the least section of the pottery and glass trades. He was there not as Mr. Hirst, of Leeds, but as the President of the China and Glass Dealers' Association, and he wondered where the manufacturers would be if they had no china and glass dealers to distribute their wares. He would be very sorry, indeed, to differ from any gentleman of the present board, but he certainly felt that he did differ a little with the first one or two speakers. A little while ago—it might be within the recollection of some of those present—a certain noble earl, dining in Glasgow—he was afraid that he had dined well and not very wisely—described they who were really the backbone of England as a number of parasites who wanted wiping out. He believed that the noble earl would find that he had got his work cut out. Twelve months ago, on behalf of the china and glass dealers of the United Kingdom, he (the speaker) along with a number of other gentlemen, went down into the Potteries, and, at the North Stafford Hotel, had a very good luncheon at the expense of the manufacturers. They put forward what they

looked upon at that time as a vital question. Twelve months had passed, and they were still waiting for a reply to that question. Mr. Burton had made a remark something about new styles, and the practicality of the potters to-day. They, as merchants, felt that the pottery manufacturers were not quite as practical as they might be. They (the merchants) had tried to show the manufacturers a better way of conducting their business than the one in which they were now conducting it, and they still felt that they had showed them a good deal, which he was thankful to say six or eight sensible people had taken up. Now, in another house, not very far away from there, about once every year they heard of the possible relations that were taking place between themselves and other powers. They, as dealers, wished to say that they had very pleasant relations indeed with the foreign agents and with the glass manufacturers of the United Kingdom. They (the dealers) were peace-loving people, but they claimed, why should they not have the same pleasant relations with the earthenware and china manufacturers? When the invitation came down to their Association from the Pottery and Glass Trades Benevolent Institution, he was instructed by his committee to let the earthenware and china manufacturers know that they were in earnest, whether they thought so or not, and that they meant to go on until all extra charges, plusages, straw, crates, &c., were done away with in the potting trade as they had been in the glass trade. He hoped that as an Institution they would never have cause to regret having invited the President of the Dealers' Association to be present with them. It might be that they were bits of parasites, but he felt sure that the manufacturers would be very badly off without them. They could quite understand a manufacturer like Mr. Powell, who told them quite frankly that he went direct to the users, but they could not understand the manufacturer who did that sort of thing without being prepared to acknowledge it frankly to the merchants. As an Association, he repeated, they wished to remain at peace, and wished to do everything they could to promote the interests of the manufacturers, but at the same time they could not disregard their own interests as merchants. They were in business not as philanthropists, but to try and make a living for themselves, and they would like the manufacturers to feel that in making for themselves a good living the dealers were doing well for the manufacturers.

Mr. H. M. ROBINSON proposed "The Chairman." He remarked that it was the first time he had attended the dinner, although he acknowledged it with shame, and he little thought that he was going to have the honour of proposing the toast of the chairman that evening. It was exceedingly kind of Lord Crewe to have come because his time must be fully occupied. The lot of a Cabinet Minister in that respect must, he thought, be very much like the life of a policeman, "not a very happy one." They all owed him a debt of gratitude for the kind offices he exercised when the King and Queen were good enough to pay the Potteries a visit in the early part of this year, and in many ways Lord Crewe was continually rendering conspicuous services to his country. He hoped the company would drink to the toast right heartily. This having been done with musical honours,

Lord CREWE responded. He said he had already tried to assure them how closely he was interested in the headquarters of the industries represented there that night. The proposer of the toast, to whom he was most grateful for his kind sentiments, had been good enough to refer to the duties which, for the time being, he had to perform as a member of His Majesty's Government. It was quite true that they were engrossing, and he hoped that some people at least would think they were beneficial, though a good many he knew regarded them as absolutely mischievous. However, it was certainly a relief to get away for a few hours from the polemics of politics, particularly when one was concerned with great national industries, and for that reason he had been extremely happy to be numbered amongst the visitors.

Before the company dispersed a telegram was read out which had been received from the King, through Lord Stamfordham, in response to a message of loyalty sent to His Majesty, as Patron, by the Institution. It read as follows:—"The Earl of Harrowby the Pottery and Glass Trades' Benevolent Institution, Whitehall Rooms, S.W.—The King has received with much satisfaction your message sent on behalf of the members of the Pottery and Glass Trades' Benevolent Institution to His Majesty as Patron of the Society. I am commanded to convey to the members assembled at the festival dinner the King's best thanks for their loyal assurances and good wishes.—STAMFORDHAM."

During the evening Mr. J. G. W. James, secretary, read the list of donations received after the printing of the list of donations and subscriptions which was circulated during the evening.

The total amount received in donations was £701 4s. 6d., which, with annual subscriptions paid during 1913, gave the handsome total of £1,034 13s.

The contributors to the Chairman's Festival Dinner List (1913) were as follows:—The Marquis of Crewe, 25 guineas; Harrods, Ltd., £131 5s.; proceeds of Concert at Queen's Hall, Burslem, promoted by the North Staffs. District Choral Society, £28 11s.; Mr. John Aynsley, J.P., £8 10s.

The following gave ten guineas each:—Booths, Ltd.; Burgess & Leigh; "The Connoisseur"; Mrs. H. Spencer Daniell (in memory of her husband, the late Mr. H. Spencer Daniell, treasurer of the Institution); Mr. H. L. Doulton; Edinburgh & Leith Flint Glass Co.; Thos. Goode & Co.; Stevens & Williams, Ltd.; Stuart & Sons, Ltd.; Thos. Webb & Sons, Ltd.; Wedgwood & Co., Ltd.

Ten pounds each:—John Aynsley & Sons; W. T. Copeland & Sons; R. D. Doulton.

Five guineas each:—Baccarat Glass Co. (per E. St. Clair): Mr. Thos. J. Barratt; Boulton & Mills; J. Chomette & Son; Green Bros.; Mr. Chas. E. Green; Mr. J. E. Heath; Geo. Jones & Sons, Ltd.; Keeling & Co., Ltd.; J. Maddock & Sons, Ltd.; C. T. Maling & Son; R. H. & S. L. Plant; THE POTTERY GAZETTE; Mr. C. J. Pratt; H. G. Richardson & Sons; Royal Crown Derby Porcelain Co., Ltd.; Stonier & Co., Ltd.; Mr. R. Stuart; Mr. W. H. Stuart, J.P.; The Lady Millicent, Duchess of Sutherland (in memory of her husband, the late Duke); United States Glass Co. (per S. C. Akehurst); Mr. John Walsh Walsh.

Five pounds each:—De Grelle, Houdret & Co.; Chas. Pillivuyt & Cie.; Mr. H. M. Robinson.

Three guineas each:—Adderleys, Ltd.; Mr. J. C. Bailey, J.P.; Mr. J. W Baker; Mr. L. C. Dams; Furnivals, Ltd.; James Green & Nephew; Mr. John Jenkins; Mr. Henry Litherland; Henry Mayer & Co., Ltd.; Mr. E. McInnes; Mr. S. Radford; Robinson, Son & Co., Ltd.; The Mayor of Stoke-on-Trent (Alderman Philip Elliott).

Three pounds:—Anon.

Two guineas each:—Mr. J. J. Adams; Anon.; T. Arrowsmith & Sons; Mr. C. H. Bowers; Mr. J. W. S. Burmester; Dartmoor China Clay Co.; Mr. John Davison, New York; Mr. John Davison; Mr. Allan Doulton; Max Emanuel & Co.; Mr. E. P. Evans; Mr. F. Findlay; Mr. A. H. Folker; Alderman F. Geen; G. L. Gent & Son; J. Gimson & Co., Ltd.; Mr. S. G. Grey; Hammersley & Co.; Harrison & Sons, Ltd.; Mr. E. Hecht; L. & S. Hingley & Sons; Johnson & Jorgensen; Mr. J. L. Kendall; Mr. W. T. Lucas; Mr. A. Mortimer; North Staffs. Hotel Co., Ltd.; F. & C. Osler, Ltd.; Phillips, Ltd.; Pountney & Co., Ltd.; James Powell & Sons; Price Bros.; Mr. T. Rigby; Mr. W. G. Savill; Mr. Robt. Shenton; Colonel R. Shoolbred; Sneyd Collieries, Ltd.; Soho Pottery, Ltd.; Mr. Henri Souweine; Verreries de Vallerysthal; Mr. Ernest Wahliss; H. Wiggin & Co.; Wiltshaw & Robinson, Ltd.

Two pounds:—Mr. F. A. Mehlem.

One guinea each:—Aelteste Volkstedler Porzellan Fabrik; Alstrohlawer Porzellan Fabrik (per C. J. Dams & Co.); Anglo-Belge Glass Assn., Ltd.; F. Arup; G. L. Ashworth & Bros.; Mr. A. H. Baker; J. E. Beales, Ltd.; Belfast Ropework Co., Ltd.; Mr. G. B. Benham; Mr. W. Bennett; Mr. Dunbar F. W. Bishop; Exors. of Thos. Blackshaw; T. & R. Boote, Ltd.; Bourne & Leigh; W. Boulton, Ltd.; Brittain's, Ltd.; Brown & Steventon, Ltd.; Mr. J. Patterson Brodie; Burtles, Tate & Co.; Mr. R. S. Carey; Mr. Emil Chatrian; Cobridge Brick Co.; Mr. Geo. Coles; Cookson & Co., Ltd.; Mr. Robt. Cormack; Corbett & Co., Ltd.; Mr. James A. Davison; Deans, 1910, Ltd.; S. Dornberger & Co.; Doyle, Ltd.; Mr. L. G. Edmead; Edwards & Sons, Ltd.; Mr. Robt. Emery; Entwistle & Stephens; Mr. R. Fendick; Fox, Roy & Co., Ltd.; Mr. G. D. Francis; Greener & Co.; M. & J. Guggenheim; Hanley Collieries, Ltd.; Mr. Hy. F. Heybourn; Mr. Samuel Hirst; S. Hoffnung & Co.; Mr. A. G. Harley Jones; Kalkmann, Gebr.; Lawrie & Bishop; Mr. James Leather; Mr. J. S. Lewis; Mr. John Leyland; Mr. F. Linnett; Locke, Lancaster and W. W. & R. Johnson & Sons, Ltd.; J. H. Middleton & Co.; Mr. A. P. Millington; Molineaux, Webb & Co.; Mr. Bernard Moore; Mr. J. G. Mortlock, Mr. G. E. Mortlock; Myott, Son & Co.; Mr. D. Nestle; H. Ogden & Co.; Mr. F. C. Palmer; Mr. C. W. Peters; Pilkington Tile & Pottery Co., Ltd.; Pointon & Co., Ltd.; Mr. John Porter; Mr. H. P. Powell; Mr. A. J. Powell; J. Price & Co.; T. Rathbone & Co.; Miss Retchford; Mr. W. Rhodes; Mr. J. S. Rubenstein; Mr. Julius Rudert; Dr. Russell; Ryles & Staub; Sherwin & Co.; Soane & Smith, Ltd.; Mr. W. J. Stonier; Sudlow & Sons; Mr. W. Howson Taylor; Mr. R. H. Thompson; Mr. A. P. Tiley; T. Till & Sons; Mr. F. W. Tranter; Mr. W. C. Tuomy; W. Varcoe & Sons, Ltd.; Villeroy & Boch; Wain & Harris; Mr. C. P. Walker; Weiss & Biheller; Mr. R. Wheeler; Mr. J. W. Wadsworth; A. J. Wilkinson, Ltd.; William Wood & Co.

One pound each:—Annaburger Steingut-fabrik; Cafferata & Co.; Conta & Boehme; Geo. De Bruyn & Fils; Duxer Porzellan; Mr. Carl Goldberg; Heraldic China Co.; Sitzendorfer Porzellan Manufacture; Société Industrielle de Vallauris; Société Anonyme de Digoin; Mr. A. Winkler.

Half-a-guinea each:—Mr. G. Behl; H. Boden & Co.; Mr. D. H. Brownfield; Diplocks, Ltd.; R. Ward Dixon & Co.; R. Fletcher & Sons, Ltd.; Mr. Fulford; Mr. W. Huntsman; Mr. S. G. Heath; F. Krasa & Co.; Mr. J. Lamb; S. Reich & Co.; J. Sadler & Sons, Ltd.; H. G. Stephenson, Ltd.; J. T. Vervloet & Co.

Ten shillings:—Mr. L. Berent. Five shillings:—Mr. A. Urban.

EXPORTS OF CHINA, EARTHENWARE, GLASS AND GLASSWARE (British Products) FOR OCTOBER, 1913.

		Quantities. Month ended October.		Quantities. Ten Months ended October.		Value. Month ended October.		Value. Ten Months ended October.	
CHINA OR PORCELAIN, EARTHENWARE AND POTTERY:		1912.	1913.	1912.	1913.	1912.	1913.	1912.	1913.
To Germany	cwts.	5,118	3,248	45,603	29,653	£8,807	£4,929	£58,484	£50,737
„ France	„	6,624	7,907	67,238	76,422	10,338	10,432	80,377	96,961
„ United States of America	„	27,744	23,303	223,462	216,978	42,010	47,674	332,679	356,674
„ Brazil	„	46,494	21,859	329,118	323,286	24,184	21,194	184,151	245,300
„ Argentine Republic	„	34,723	42,924	302,969	489,253	24,442	26,478	217,622	283,057
„ British South Africa	„	17,916	11,558	105,641	125,497	15,916	12,024	106,344	114,837
„ British East Indies	„	42,487	31,070	315,272	333,614	26,771	22,784	188,985	224,994
„ Australia	„	29,676	24,205	217,355	228,136	35,074	26,189	264,167	268,292
„ New Zealand	„	14,548	7,810	79,704	72,601	21,420	13,212	106,577	106,628
„ Canada	„	80,151	59,335	506,339	504,010	56,163	39,815	385,338	418,731
„ Other Countries	„	114,987	98,278	929,410	997,678	82,893	72,419	639,925	686,862
MADE UP AS FOLLOWS:									
Porcelain, Chinaware, and Parian	„	2,412	2,065	14,180	16,932	23,673	25,245	136,389	174,641
Floor Tiles for Tesselated Pavement	„	7,376	5,234	63,845	67,518	6,559	5,323	61,375	60,216
All other Tiles (except Roofing and Street Paving)	„	19,185	13,750	129,784	144,633	19,900	15,164	127,520	151,896
Sanitary Ware	„	38,546	30,130	304,524	316,370	58,846	45,252	429,638	471,653
Electrical Ware, Door Fittings, and Chemical Ware	„	4,595	5,168	37,969	48,403	4,348	7,744	36,419	49,389
Other Earthenware (including Semi-Porcelain and Majolica)	„	144,380	122,231	1,147,185	1,185,186	197,956	168,246	1,518,385	1,616,990
Jet, Rock'm, and Glazed Terra-cotta	„	2,107	106	6,929	5,178	1,610	178	6,271	4,919
Red, Stone, Brown and Yellow Ware	„	201,867	152,813	1,417,695	1,612,908	35,126	29,998	248,652	323,369
GLASS.									
To British South Africa	value £	—	—	—	—	15,615	13,015	91,532	97,390
„ Other Countries	„	—	—	—	—	193,512	157,564	1,408,300	1,433,605
MADE UP AS FOLLOWS:									
Plate Glass	cwts.	29,657	19,006	188,127	202,855	49,063	31,842	322,614	335,822
Flint Glass	„	8,218	7,422	72,086	69,669	31,085	30,932	240,693	260,983
Glass Bottles	gross	110,568	95,278	852,897	810,135	74,019	59,316	531,603	505,000
Glass Manufactures, unenumerated	cwts.	69,753	60,219	546,105	535,510	54,960	48,489	404,922	429,190

IMPORTS OF CHINA, EARTHENWARE, AND GLASS FOR OCTOBER, 1913.

Porcelain, Chinaware, and Parian	cwts.	3,111	3,985	36,424	36,279	£13,461	£20,162	£178,211	£183,463
Floor Tiles for Tesselated Pavement	„	150	188	515	1,230	100	286	593	1,116
All other Tiles (except Roofing and Street Paving)	„	3,026	4,255	25,022	31,789	1,993	3,409	15,795	22,112
Sanitary Ware	„	10	55	297	288	12	147	607	747
Electrical Ware, Door Fittings and Chemical Ware	„	2,650	3,371	23,069	26,118	3,701	4,550	35,766	42,685
Other Earthenware (including Semi-Porcelain and Majolica)	„	29,237	31,624	265,582	281,714	58,231	65,097	532,365	570,991
Jet, Rock'm, and Glazed Terra-cotta	„	107	112	309	918	208	169	914	1,820
Red, Stone, Brown and Yellow Ware	„	30,793	31,066	199,338	294,955	5,529	5,264	44,589	61,164
Window and German Sheet Glass	„	113,534	117,066	1,072,589	1,011,219	68,464	65,270	619,803	576,537
Plate Glass	„	32,097	24,671	284,945	384,406	41,773	31,445	355,669	470,109
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass	„	77,050	94,031	713,273	806,617	112,249	129,192	1,063,081	1,117,989
Glass Bottles	gross	145,030	176,195	1,415,367	1,604,636	64,167	75,800	611,732	673,370
Glass Manufactures, unenumerated	cwts.	186	58	14,768	2,335	642	88	13,352	3,832

EXPORTS OF CHINA, EARTHENWARE, AND GLASS (Foreign and Colonial Merchandise) FOR OCTOBER, 1913.

Porcelain, Chinaware, and Parian	cwts.	355	1,379	12,042	11,148	£2,492	£6,798	£63,853	£59,075
Of all Other Sorts	„	1,061	1,065	7,627	10,425	1,885	2,017	11,268	21,003
Window and German Sheet Glass	„	1,372	2,534	9,297	8,489	757	958	5,449	4,105
Plate Glass	„	554	243	4,426	8,250	827	405	6,597	12,040
Flint, plain, cut, or ornamented, and other Manufactures of Flint Glass (except bottles)	„	972	1,126	10,585	11,608	3,394	3,965	28,669	38,053
Glass Bottles	gross	5,024	8,611	35,248	57,816	2,624	5,646	18,574	34,893
Glass Manufactures, unenumerated	cwts.	125	42	1,428	1,226	73	31	1,519	963

EARTHENWARE EXPORTS TO THE UNITED STATES

Compiled from the Returns of D. Inglis & Co.

TO	Shipments from Sept. 28, 1913, to Oct. 25. Packages.	Corresponding Period, 1912. Packages.	Exports Jan. 1 to Oct. 25. Packages.	Corresponding Period, 1912. Packages.
Boston	515	571	5,913	5,553
New York	589	1,101	7,254	8,092
Baltimore	517	1,109	4,892	6,942
Philadelphia.....	217	138	1,955	2,495
New Orleans.....	168	185	1,231	911
Newport News ...	—	—	41	54
San Francisco ...	204	102	1,082	1,240
Portland, Maine.	—	—	1,302	659
Galveston	7	72	261	532
Portland, Oregon	—	94	203	316
Inland Points ...	41	60	630	601
Total	2,258	3,432	24,764	27,395

Trade Notes.

The Editors are always glad to receive items of trade intelligence such as removals, new premises, personal items, &c. ; also marked local newspapers.

Mr. J. Stanley, of the Anglo-Belge Glass Association, Ltd., sailed by the "Mauretania," on Nov. 8, for New York and Toronto.

Mr. Thos. Nicholls, of Penpoll-street, St. Austell, who was for a long period in business as a china clay merchant, has recently died.

Mr. Joseph Green, who held a prominent position in the works at Mauberge (France) of Pilkington Bros., Ltd., glass manufacturers, St. Helens, died suddenly last month after undergoing an operation.

Wedgwood & Co., Ltd., of Tunstall, have appointed Fondeville & Van Iderstine, 37, Warren-street, as their New York agents, and Mr. Emerson Nichols, London, Ont., Canada, as their agent for Canada.

British Clay Exports during the month of October were as follows :—China clay, 35,904 tons (£44,791) ; fire clay, 3,587 tons (£3,387) ; other sorts, 7,760 tons (£7,296). Exports for October, 1912, were : China clay, 72,294 tons (£81,171) ; fire clay, 7,096 tons (£4,891) ; other sorts, 7,568 tons (£6,260).

The death has taken place of Mr. J. E. Place, J.P., member of the firm of Joseph Place & Sons, Ltd., sanitary pipe and enamelled brick manufacturers, Hoddlesden and Eccleshall, Darwen. He was 70 years of age, was an original member of the Darwen Town Council, and a leading Liberal and Freemason.

Mr. Thos. Smith, who died on Nov. 9, in his eighty-fifth year, at Castleford, was looked upon as the oldest glass bottle maker in Yorkshire. He commenced at the age of 7½ years at the Ryebread Works of Breffit & Co. He continued as a glass bottle maker at the works for about 47 years.

Mr. William Thompson, who died on Nov. 24 at his residence, 5, Princess-st., Sunderland, had carried on business for a number of years as a glass and china merchant in the New Arcade. He was 72 years of age, and leaves a widow, two sons, and a daughter. He was a prominent worker in the Methodist cause, and was highly respected in the trade for his integrity and ability.

Bullocks in China Shops.—On Oct. 28 the glass and china establishment of Mr. Christopher Brown, Hills-road, Cambridge, was invaded by two bullocks, both of which got behind the counter. In spite of the narrow space between the counter and the shelves none of the goods there was damaged, but crockery which was on the floor was smashed. The damage done, however, was small, considering what might have happened.——At Ashford (Kent), on Nov. 11, a bullock being driven through Bank-street entered the establishment of Mr. Geo. Mence Smith, and brought down a quantity of crockery from the shelves, doing damage to the extent of £2 2s.

The Golden Wedding was celebrated on Nov. 7 of Mr. Alfred Hartley and Mrs. Hartley, of Bingley (Yorks), and they were the recipients of many cordial congratulations. Mr. Hartley was for a number of years President of the Yorkshire Potters' Association, and its representative to the meetings of the Lancashire Association. In recognition of his valuable services to the trade, the Yorkshire Association, now combined with the Lancashire Association, presented him five years ago with a silver tea and coffee service, and he has now received a silver salver to suit as a golden wedding present. In business he was formerly associated with J. Barrow & Sons, Bingley, for whom he was manager, and when the Bingley Sanitary Tube Co. was formed, in 1889, he became their secretary, a position he still retains.

Fires.—A fire occurred recently at the premises of Chance Bros. & Co., Ltd., Spon-lane, Glass Works, West Smethwick. The outbreak originated amongst a quantity of packing straw stored in two blocks of buildings of three bays each. The firemen had to work all night, and they were successful in preventing the flames from spreading to other parts of the works. The damage was confined to the straw and the sheds in which it was stored. ——A fire occurred on Nov. 6 at the premises of Mrs. Carron, glass and china dealer, High-street, Bilston, near Wolverhampton. The fire was discovered at about 3.15 a.m. by a constable, and as the shop was a lock-up one an entrance had to be forced. The flames were speedily subdued by the fire brigade, but not before a good deal of damage had been done to the woodwork and stock. The cause of the outbreak is unknown.

Municipal Honours.—The following members of the trade have been elected unopposed members of town councils :—Mr. A. T. Underwood, glass merchant, 14, Westcotes Drive, Leicester ; Mr. Richard Henry Millican, glass merchant, 10, Westfield Drive, Gosforth, Newcastle-on-Tyne ; and Mr. Frederick Hampson, glass manufacturer, Oldfield-road, Salford (re-elected). Mr. Hart, glass and china dealer, Harbour-street, Ramsgate, has been re-elected an Alderman of the Corporation, of which he is one of the senior members.——Mr. I. T. Stone, glass merchant, The Maples, Maplegrove, Bath, has been re-elected on the City Council. ——Mr. Fredk. Geo. Thornton, glass and china dealer, 13, Balmoral-road, has been re-elected on the Town Council at Gillingham (Kent).——Mr. Josiah Lane, glass manufacturer, 74, Grange-road, Dudley, has been elected on the Town Council.——Mr. Jas. H. Steele, glass manufacturer, Lower Sudley-rd., Pendleton, has been re-elected a member of the Salford Town Council for the Weaste Ward.——Mr. Pilkington, glass manufacturer, has been re-elected an Alderman of St. Helen's Town Council.

Lead Poisoning.—The total number of cases of lead poisoning reported to the Home Office under the Factory and Workshop Act during October, 1913, was 52, of which two were fatal. In addition, there were 32 cases of lead poisoning (three of which were fatal) reported among house painters and plumbers. During the ten months ended October, 1913, the total number of cases of lead poisoning reported under the Factory and Workshop Act was 456, as compared with 469 during the corresponding period of 1912. The number of deaths in 1913 was 18, as compared with 34 in 1912. In addition there were 254 cases of lead poisoning (including 32 deaths) among house painters and plumbers in the first ten months of the year, as compared with 211 cases (including 37 deaths) in the corresponding period of 1912. Of the 52 reported cases of lead poisoning in October last under the Factory and Workshop Act, there were 3 cases in connection with the china and earthenware trades. During the ten months

ended October, 1913, there were 52 reported cases, and 8 deaths in our industries as compared with 62 cases and 13 deaths during the corresponding period of 1912.

Death of Mr. J. J. Candlish.—We regret to record that Mr. Joseph John Candlish, head of the firm of Robert Candlish & Son, bottle manufacturers, Seaham Harbour, died at Shotton Hall, near Seaham Harbour, on Nov. 19. He was 58 years of age, and leaves a widow but no family. Mr. Candlish was educated in London, and for some time represented his firm in the Metropolis, but on his father's death returned to the north, becoming, in 1887, principal at the works at Seaham Harbour. Mr. Candlish was one of the originators of the scheme completed this year by which several of the chief bottlemaking firms in the kingdom combined under the style of the United Glass Bottle Manufacturers, Ltd. The members of the combination continue to carry on business in their own works independently, but there is a joint board of directors of which Mr. Candlish was chairman, as well as the different boards of the various companies. Up to a few years ago Mr. Candlish was intimately connected with the public life of Seaham Harbour, being at one time chairman of the Urban Council and representative on the Durham County Council. He was a member of the Executive of the Tariff Reform League and was a member of the unofficial Tariff Commission instituted by Mr. Joseph Chamberlain. He was also a prominent Freemason, being a Past Provincial Senior Grand Warden.

Suggested Stourbridge Glass Fair.—An Editorial Note in the Stourbridge "County Express," refers to the example of the North Staffordshire pottery industry, which is organising for next February a "fair" or exhibition of its productions, which, it is hoped, will become an annual event upon which will concentrate all those who are interested in the purchase of the latest designs of the potters' art. The writer continues:—"If the Potteries can thus organise a demonstration of their staple industry, is it too much to suggest that something of the same kind might be inaugurated for Stourbridge, the titular head of the flint glass trade of the country? There are difficulties, no doubt, to be faced, so we should like to see a free and open discussion as to the possibility of something of the kind being arranged locally, if only to emphasise the leading part which this district holds in the glassmaking world. In this district, which is so closely indentified with some of the greatest artistic and industrial triumphs of glass, there is nowhere a visitor can be taken to be shown what Stourbridge stands for in the trade. Manufacturers are very generous in allowing their friends to inspect their show rooms, and it is privilege which many visitors to Stourbridge remember with the happiest recollection, but we think that a concerted endeavour to place before not only Stourbridge people, but the whole glass-buying world, an annual display of their latest creations is a matter to which the local manufacturers might turn their attention."

The Shops Act.—An order for glass and china dealers to close each Thursday at 1 p.m. has been made for Elstree (Herts.).——Tredegar Urban Council, on Nov. 7, issued a draft order for glass and china dealers in the town to close at 7 p.m. on Monday, Tuesday, and Wednesday; 1 p.m. or 7 p.m. on Thursday; 7.30 p.m. on Fridays, and 10.30 p.m. or 1 p.m. on Saturday. Objections or suggestions relating to the order must be sent to the Home Secretary, London, before Dec. 8.——Staffs. County Council have made an order for glass and china dealers at Smallthorne to close each Thursday at 1 p.m.——An order for glass, china, and earthenware dealers at Millom to close on Wednesdays at 1 p.m. was issued on Nov. 12 by the Cumberland County Council.——Deal (Kent) Town Council have made an order suspending half-day closing by the glass and china trade during the week ending Dec. 20, on account of the Christmas trade.——Under orders just made, Wednesday has been fixed as the early closing day for glass and china dealers at Bushey, and Thursday at Barnet.——The Gellygaer (Glam.) U.D.C. are making a weekly half-holiday closing order under the Shop Hours Act (1912) for the china dealers in the urban area, the day fixed being Thursday at 1 p.m. There is the usual Saturday alternative.——A petition has been sent to the Wolverhampton Corporation Watch Committee asking for a closing order for the glass and china trade. The Committee reports that there is the necessary two-thirds majority in favour, and the requisite steps are to be taken to comply with the request.——Lancs. County Council have been applied to for an order for all non-exempted trades at Lytham to close at 8 p.m. on Monday, Tuesday, Thursday, and Friday; 1 p.m. on Wednesday; and 10 p.m. on Saturday.——Heath Town Urban Council have made an order for glass and china dealers to close each Thursday at 1 p.m.——Cardiganshire County Council have issued a draft order for the glass and china trade in the whole of the county, excepting the Boroughs of Aberystwyth, Lampeter and Cardigan, and the parishes of Aberayron, New Quay, and Borth to close at 9 p.m. on Monday, Tuesday, Thursday and Friday; 1 p.m. on Wednesday, and 10 p.m. on Saturday; with total exemption during the months of July, August, and September. Objections or suggestions relating to the order must be sent to the Clerk, Mr. Evan Evans, Aberystwyth, before Dec. 22.——Norfolk County Council have been petitioned to make an order for all non-exempted trades at Wymondham to close at 7 p.m. on Monday, Tuesday and Thursday; 1 p.m. on Wednesday, and 9 p.m on Friday and Saturday.——Wolstanton Urban Council have issued an order for glass and china dealers to close each Thursday at 1 o'clock.——China dealers are included in an order made by the Northampton Town Council for closing at 1 p.m. each Thursday.——Ashby-de-la-Zouch tradesmen have applied to the County Council for an order fixing Wednesday as the early closing day for all trades.——The East Riding of Yorks County Council have declined, on account of opposition, to make a closing order for traders at Hornsea, and a similar decision has been arrived at at Stone (Staffs.).——Owing to the inclusion of Leigh-on-Sea and Eastwood in the Borough of Southend-on-Sea, the closing order fixing Wednesday as the early closing day in force at Southend, has been extended to those places for glass, china and earthenware dealers.

CHANGES OF ADDRESS, NEW PREMISES, &c.

The following paragraphs have been specially written for "The Pottery Gazette," and are strictly copyright.

Mr. J. Thompson, glass and china merchant, Kendal, has removed to new premises at Dolphin House, opposite the Town Hall.

Mr. Henry Taylor announces that he has succeeded to the business of Harriet Taylor, china merchant, 26, Trinity-street, Barnstaple.

The Austro-Hungarian Chamber of Commerce and Industry (Inc.) has removed from 29, Martin's-lane, Cannon-street, E.C., to 119-120, London-wall, E.C.

James Howell & Co., Ltd., the well-known drapery firm of Cardiff, have opened new earthenware and china premises in Wharton-street, at the corner of The Hayes, Cardiff.

Birks, Rawlins & Co., of The Vine Pottery, Stoke-on-Trent, have appointed Mr. S. Stanley to be their London agent. Mr. Stanley has arranged to have on view at 20, Bartlett's-buildings, Holborn Circus, a full range of

samples, and can always be seen there on Tuesdays and Fridays, and by appointment on other days of the week.

Mr. P. T. Harvey has taken over the china and glass business of Mr. Wm. Coupe, The Square, St. Anne's-on-Sea. For some years Mr. Harvey represented Josiah Wedgwood & Sons, Ltd., of Etruria, in the North of England, Scotland, and Holland, but for his health's sake it has become necessary for him to give up "the road." As a souvenir of the very happy relations which have always existed between the firm and himself the directors and members of staff have presented Mr. Harvey with a rest or lounge chair.

CONTRACTS OPEN.

Elham (Kent) Board of Guardians invites tenders by Dec. 11 for crockery. Tender forms can be obtained from the Clerk, Mr. E. Lovick, 29, Bouverie-square, Folkestone.

Tenders to be delivered by Dec. 9 are invited by the Committee of Visitors of the Glamorgan County Asylum, Bridgend, for crockery for a year from April 1 next. Tender forms from Mr. H. W. Davies, Clerk, the Asylum.

Tenders are invited by the Deputy Postmaster-General, Brisbane, to whom the tenders should be returned by Dec. 17, for the supply and delivery of insulators (schedule No. 280). A deposit of 5 per cent. on the first £1,000, and of 2½ per cent. on the amount above that sum, is required, and local representation is neecssary. Forms of tender, &c., can be had on application to the Office of the High Commissioner for the Commonwealth of Australia, 72, Victoria-st., S.W., where also preliminary deposits may be paid.

TENDERS ACCEPTED.

For the Christchurch Guardians :—J. E. Beale, Ltd., Bournemouth, crockery, £20 7s. 1d.

For the Birkenhead Guardians :—Crockery, for workhouse and infirmary for one year, Mr. O. Pegg.

For the Metropolitan Water Board (recommended for acceptance) :—Earthenware, W. Adams & Co., Tunstall, £190 ; china, G. Wilson & Sons. Fenton, £135.

Government contracts let during October :—G.P.O. : Insulators, Bullers, Ltd., Tipton ; Boulton & Co., Ltd., Burslem ; Taylor, Tunnicliff & Co., Ltd., Stoke-on-Trent. Stoneware jars, J. Bourne & Son, Denby.

For the L.C.C. :—Sheet and plate glass : J. Chater & Sons, 2, St. Dunstan's-hill, E.C., 2 items (British), £50 ; T. & W. Farmiloe, Ltd., Rochester-row, S.W., 5 items (foreign), 18 items (British), £881 ; Pilkington Bros., Ltd., St. Helens, 4 items (British), £135 ; S. Pontifex & Co., Euston-st., N.W., 2 items (British), £19. Lamp glasses, shades, globes, &c. : J. B. Arch & Son, Boston, 3 items, £8 ; Clayton, Mayers & Co., 28, Gray's-inn-rd., W.C., 2 items, £34 ; Falk, Stadelmann & Co., Ltd., 83-87, Farringdon-rd., E.C., 3 items, £36 ; Johnsen & Jorgensen, Ltd., 26-27, Farringdon-st., E.C., 5 items, £230 ; the Reform Lighting Co., Ltd., 154, Bermondsey-st., E.C., 3 items, £67 ; the Welsbach Light Co., Ltd., 344-354, Gray's-inn-rd., W.C., 4 items, £12.

LIMITED PARTNERSHIP.

H. E. Leaney & Co.—Rd. No. 547.—Licensed victuallers' glass and china sundriesmen and hirers of china, glass, &c., Elmwood, Kew Foot-road, Richmond, Surrey. Partnership from Oct. 20, 1913, until determined by six months' notice in writing. General partner : H. E. Leaney, 10, Onslow-avenue, Richmond. Limited partner : J. W. Levers, Farnham Common, near Slough, contributing £75 in cash.

NEW COMPANIES, COMPANY REPORTS, &c.

Heneward China Clay Co., Ltd.—Rd. No. 131,705.—This private company has been registered with a capital of £5,000, in £1 shares, the objects being to carry on the business of workers and manufacturers of and dealers in clay, china, bricks, &c., and to adopt an agreement with J. Willcock. Registered office, 9 and 10, East-hill, St. Austell.

Dartmoor Forest Mining and Exploration Syndicate, Ltd. Rd. No. 132,246. — This private company has been registered with a capital of £1,000 in £1 shares. Objects : To acquire any mines, mining rights, claims and metalliferous land in England or elsewhere, to turn to account deposits and beds of kaolin, china, mica and other clays, lime, earths, &c. The subscribers are H. H. Walton, 55, Chapter-rd., Kennington, S.E., and A. C. Dowsing, 4, Larden-rd., The Vale, Acton, W.

C. McD. Mann & Co., Ltd.—Rd. No. 131,833.—This private company has been registered with a capital of £1,500, in £1 shares, to take over the business carried on at Leadenhall House, 101, Leadenhall-street, E.C., and Kensington Works, Hanley, as "C. McD. Mann & Co.," and to carry on the business of exporters of and dealers in earthenware, china, glass, and other articles of manufacture, &c., and to adopt an agreement with F. P. Harris. Registered office, 101, Leadenhall-street, E.C.

Leeds Fireclay Co., Ltd.—The report adopted at the meeting at Leeds on Nov. 17, covering the twelve months to June 30, 1913, stated that the sales for the past twelve months considerably exceeded those for the previous year, but the increase was mainly outside the building trade, which still continued in a seriously depressed condition. The trading profits showed improvement and amounted (after providing £1,003 for health insurance) to £8,036, to which is to be added £1,153 from the previous year. Debenture interest absorbs £12,000 and depreciation of investments £1,400. The directors regretted that the extra profits earned during the year had been almost exhausted by the increased cost of fuel and stores. Following an abnormal rainfall, the pits in the Leeds district and at Huddersfield had been flooded for a considerable period, entailing serious costs for restoration. At the annual meeting, on Nov. 18, the chairman, Mr. C. F. Spencer, explained that in consequence of the unsatisfactory state of affairs the board of directors had been reconstituted. The former board had voluntarily resigned. It was hardly prudent, he thought, for the directors of many years ago to have invested their money on landed property at a time when that property was not of the very best character. The company was paying 4 per cent. for £300,000 worth of debentures, and the greatest yield in income from the whole of this property only came to 2·61 per cent., so that the shareholders were actually losing money on the investments. The report was adopted.

Liens, Debentures, Satisfactions, &c.—Swinnertons, Ltd., Hanley.—Registered, mortgage or charge for securing all moneys now due or to become due, to Lloyd's Bank, Ltd., but not exceeding £3,000 : charged on Vulcan Works, Slippery-lane, Hanley.——Cornish Kaolin, Ltd., London, E.C.—Registered, £6,700 debentures part of £25,000 ; general charge.——Hensbarrow China Clays, Ltd., Plymouth.—Registered, £12,000 debentures secured by trust deed of Oct. 24, 1913, supplemental to trust deed of July 8, 1912, and ranking pari passu with debentures secured thereby ; charged on leasehold property at St. Austell, also a general charge.——Preston and Cottam Hall Brick and Tile Co., Ltd. (late Preston and District Brick and Tile Co., Ltd.).—Registered, £1,250 debentures ; general charge.——Dukes (Stourbridge), Ltd., Birmingham.—Registered £1,750 debenture, to A. Kohn, Ludgate-hill, Birmingham, wholesale glass merchant ; general charge.

Legal.

Compensation Claim Fails.—(From our Potteries Correspondent.)—At the Stoke County Court on Nov. 12, Judge Ruegg gave judgment in the compensation claim, Dearn v. Bridgwood & Son, reported last month. The question at issue was whether the death of a workman employed as a glost placer, which was due to phthisis, was accelerated by lead poisoning. His Honour said the medical referee (Dr. Otto Kauffman) had come to the conclusion that lead poisoning did not accelerate the man's death, and although he (the Judge) did not go quite so far, still there was considerable doubt in the case, and there would be judgment for the respondents.

Sequel to a Distress.—At the November sitting of the Brigg (Lincs.) County Court, before Judge Baker, Edmund Thorpe, glass and china dealer, Brigg, sued Cloakie & Co., potters, Castleford, for £10 10s. damages for unlawful execution, and the defendants paid £2 11s. 9d. into Court in satisfaction. Plaintiff's case was that in Oct., 1912, he ordered from the defendants a crate of pottery, value £5 1s. 9d. He paid £3 on account, and later the balance. Shortly after the settlement defendants issued a County Court summons for the £2 1s. 9d., and plaintiff allowed judgment to go by default. An execution was levied for the £2 1s. 9d., and 15s. 6d. costs, and to levy it, the bailiff went to plaintiff's stand in the Market-place. Plaintiff ultimately satisfied the demand made by the bailiff, and he asserted that through the distress being made in the presence of customers he lost trade. For the defence, it was submitted that sufficient damages had been paid into Court, as the balance of plaintiff's account was not paid when the County Court summons was issued by the defendants. The Judge awarded plaintiff £5 damages and costs.

Boy Labour in Glass Works.—John Kilner & Sons, Ltd., glass bottle manufacturers, of Wakefield, were summoned on Nov. 7 for committing two breaches of the Factory Act by having at work two boys aged 13 after the scheduled hour. Mr. Barron Kilner, head of the firm, said he frankly admitted that he had broken the law, but he did not admit it was a just law. This boy question was absolutely "murdering" the glass bottle trade, and manufacturers were at present taking steps to secure some alteration of the present regulations as to the employment of boys. When the latter left in the evening men had to be brought in to do their work, which caused prices to go up, and trade was thus being driven out of the country and into the hands of foreigners. "To show how it affects us," added Mr. Kilner, "from April this year to the end of October we have lost no less than 251 'journeys' for want of boys, which means 25,000 dozens of bottles, and if you only average them at 1s. a dozen that means £1.250. Out of that the workmen have lost £250 in wages—all for want of boys." The Bench pointed out that they had simply to administer the Act as it stood, and fined the defendants £2 and 12s. costs in each case.

Unfenced Gearing in a Pottery.—(From our Potteries Correspondent.)—The Potteries Stipendiary, Mr. Bertram C. Brough, heard a case at Hanley on Oct. 27, in which Johnson Bros., Ltd., pottery manufacturers, were summoned for that they "being the occupiers of the Trent Pottery, Hanley, on Aug. 21, had certain parts of the mill gearing, to wit, the bevel wheels and vertical shaft driving a certain agitator in a sliphouse, neither securely fenced, nor in such a position, nor of such construction as to be equally safe to every person employed or working in the said factory, as they would have been if they had been securely fenced, and in consequence of which one William Bishop was killed." The summons had been issued at the instance of Mr. C. R. Pendock (H.M. Inspector of Factories), and was the sequel to a fatal accident on Aug. 21, when the man, William Bishop, while oiling the gearing, had his arm drawn into the machinery and was fatally injured. The case for the prosecution was that the gearing should have been securely fenced. The defence was that if fenced a new danger would be created; that the gearing had been in the same condition for ten years without the factory inspectors calling attention to it; and that similar machinery was unfenced in other factories of the district. Expert witnesses were called by the defendants, including Mr. Bernard Moore, who said there was a great deal of similar machinery in the district, but he could not recall a case where a similar wheel was fenced, having regard to its height. The gearing compared favourably with similar machinery in other factories. He thought to put a guard under the wheel would result in the introduction of a new danger. The Magistrate imposed a fine of £25 and costs.

Damages for Repudiated Contract.—At the November sitting of the Derby County Court, before Judge Alan Macpherson, an action was heard in which Wills & Hepworth, artistic printers, Loughborough, sued Mansfield Bros., Gresley Tile Works, for £96 damages, for refusal to accept printing work done under contract. The dispute was with reference to coloured catalogues for tiles, and plaintiffs' counsel said that when proofs were submitted, defendants refused to accept them, and cancelled the order, complaining that the reproduction of certain water-colour drawings of tiles were not in the same colours as the tiles themselves. Counsel pointed out that defendants had in the letter on which plaintiffs relied, mainly accepted their offer for tri-chromatic printing in accordance with the samples that had been submitted, and he asked how could the defendants reasonably expect reproductions of water-colour drawings to be exactly the same as the tiles themselves. He added that plaintiffs got as near nature as possible. Mr. Willis, counsel for the defendants, contended that the contract was never really entered into, that although the work was to be finished in two months, the contract was not cancelled until after five months, and that, as a matter of fact, the only sample of tile painting which was supplied to them was a sample of plaintiffs' work, and upon which they gave the order, was not a sample of their work at all. It was a sample of the printing of another firm. When they accepted the contract and gave the order in accordance with the specimen sheet, they cut the sheet in half, and kept one part themselves, and none of the proofs came up to the specimen retained. Plaintiffs' counsel replied that on defendants cancelling the order his clients said they could not permit such a course in regard to work over which they had spent £90. Fresh proofs were sent, but still did not satisfy, and defendants must have either a mistaken idea of what a three-colour process was capable of, or they must have been so biassed by the continual sight of their own tiles. The Judge: It is not so much what a three-colour process is capable of as what you undertook to do. Counsel replied that plaintiffs were only claiming out of pocket expenses incurred in endeavouring to carry out specific instructions to the order of the defendants. The latter could counter-claim for reduction in price, but not that day. Mr. Willis argued that plaintiffs submitted a design of another firm as a sample of their own work, a thing they admitted, but could not produce it when called upon whilst there was a time limit to the contract, if contract there was, which was allowed to slip by. The Judge awarded the plaintiffs the full sum claimed, with costs, and remarked that to his mind the defendants had been quite unreasonable in their demands, and from a legal point

of view he held that they had no right to reject the contract, because the only reason the catalogues were not delivered in bulk was that the defendants themselves cancelled the order before it was fulfilled.

Pottery Design Dispute.—(Special Report.)—Mr. Justice Bankes and a special jury in the King's Bench Division on Nov. 25 heard the action in which the plaintiffs, F. Winkle & Co., of the Colonial Potteries, Stoke-on-Trent, sued G. L. Gent & Son, of Holborn-circus, E.C., asking for an injunction to restrain defendants from infringing a copyright design of a toilet ewer of the registered No. 554,111. Plaintiffs also asked for an account of all articles to which the said design was applied, and of the profits made by the sale, and for the delivery up of all moulds for the manufacture of these ewers, and alternatively for damages. Defendants denied that the design in question was a new and unpublished one, and they denied that they sold any ewer to which plaintiffs' design or any fraudulent imitation was applied. They also said that plaintiffs had failed to have their ewers properly marked with the design as provided by the Patents and Designs Act of 1907. Mr. Thos. Terrell, K.C., and Mr. J. W. McCarthy appeared for the plaintiffs, and Mr. A. J. Walter, K.C., and Mr. D. M. Kerley for the defendants. Before the jury were sworn, Mr. Walter submitted the preliminary point that the plaintiffs could not maintain the action because plaintiffs were only assignees of the copyright. After some discussion between counsel, his Lordship said he thought the jury had better be sworn and hear the evidence, and give a verdict. Then he (the Judge) would give his decision, and the defendants could, if they chose, take his decision to the Court of Appeal. Counsel agreed, each side reserving all rights in the matter. The jury were then sworn, and Mr. Terrell in opening the case said plaintiffs carried on an extensive pottery business in Staffordshire, and in 1909 they desired an improved design for a toilet ewer. A design was accordingly prepared, and was registered in Dec., 1909, when the present plaintiff company was carried on as a private firm by Mr. F. Winkle. This design led to considerable success at once, some 12,000 copies being sold within a few years, and among the people who bought the design were the defendants. The design was named the "Majestic," but was generally called the "Octagon" shape. It was subsequently found that Bailey & Son, of Longton, were making similar shapes. They were threatened with an action, and they promised they would make no more. Subsequently it seemed that defendants, who had paid plaintiffs 18s. 6d. for these shaped sets, got Bailey & Sons to supply them at 15s. 6d. They also wrote to Bailey's: "We are under the impression that the set of ware you have of Winkles has got no registered mark. If that is so we do not think they could claim for damages." In July, 1912, the defendant Gent called on Winkle & Co. and had an interview with regard to the infringements. He said then that he did not know the design was registered, and Mr. Winkle said to him, "Well, at any rate, you know it now," and defendant was shown the registered mark. Defendant then said he would sell no more of them; he was sorry for what had happened, and he threw the blame on Bailey & Son. He also promised orders for plaintiffs, and suggested they should go on dealing together as good friends. In August defendant wrote and sent some orders to plaintiffs, but in the following November a Mr. Porter saw some exact copies of plaintiffs' ewers at the Hackney Furnishing Co., which were sold to that company by defendant in breach of the undertaking he had given to plaintiffs that he would have nothing more to do with any infringements. Under these circumstances plaintiffs brought the present action. Some samples of the plaintiffs' ewers and those which were sold by defendant in alleged infringements of plaintiffs' design were then placed on the solicitors' table for the inspection of the jury. Mr. Terrell said the jury need take no notice of the decoration. It was the shape simply that was in question. The hearing was adjourned to the next day, when evidence was called for the plaintiffs. Mr. Arthur Ernest Winkle said in December, 1909, he and his brother traded as Winkle & Co., and on Dec. 15 of that year the design in question was registered. In May, 1912, he was informed by one of his designers that a ewer similar to his was exhibited for sale at Uttoxeter. This was bought, and it was found that it was made by Bailey & Son, who were potters at Longton. Upon inquiry they found that Mr. Gent was responsible. In July witness saw Mr. Gent on the subject. He said to witness he was sorry for his action. Witness said defendant knew quite well it was a registered design, and he said he did not. He said Mr. Bailey came to see him and bought a set of the "Majestic." Witness said Gent ought to have known that if a manufacturer bought a set he did so in order to copy it. Gent said he would not have sold it if he had known that. Witness showed him the registered number on the hollow of the ewer, and he then said he would see Bailey and advise him to cease making them. Witness saw Gent again in August, and it was then arranged that defendant should open business again with witness, who would not deal in any way with the registered design. In the following November Wright saw exposed by the Hackney Furnishing Co. a copy of the registered design. He bought the ewer and was informed it was supplied by the defendants, Gent & Son. This ewer was an infringment of witness's copyright, and witness accordingly brought the action. He understood Baileys sold the ewer for about 14s. 6d. This design was one of the most important in their trade, and the result of defendants' action was to seriously affect witness's trade. Mr. Walter, K.C., for the defendants, said no damage could be recovered for general loss in a case of infringement of a design. In further cross-examination witness said he did not lower his price in consequence of competition, but he lost business. There were about 40 ewers made without the registration mark on, but these were made before the registration number was received. Cross-examined by Mr. Walter: He was not aware that he had sold to the defendant Mr. Gent some of the unmarked ewers. The price of the ewer alone was 4s. 6d., and the profit was 15 per cent. He was not aware that the total number of ewers sold by defendant since July was 30. Further cross-examined: The ewer was the only thing in the toilet set which was registered, and the basin could be bought anywhere. Witness admitted that he had got an injunction against Mr. Bailey, but had settled with him without getting any damages. He did not know how many sets Bailey made of the registered design, but it was a large number. He believed other people had bought from Bailey, but he had taken no proceedings against others. He sold the set for 18s., and he believed the price defendant sold was 21s. 6d. Mr. Walter: Defendant did not sell to the public, but only to merchants. (To witness): You don't suggest you lost trade because defendant sold at 21s. 6d., and you sold at 18s. 6d.? No, we lost because Gent bought of Bailey and not of us. Re-examined: Witness let Bailey off damages because he had no money to pay them. He proceeded against Gent, as he considered he was the prime mover in the infringement. Mr. L. H. Winkle, brother of last witness, said he was present with his brother at the interview with Mr. Gent on Aug. 29. Mr. Gent said if they would go on doing business with him he would not deal in any way with the ewer in question. Cross-examined: Nothing was said about the goods Mr. Gent had in stock. Mr. E. R. Bailey, earthen-

ware manufaeturer. of Longton, said in June, 1911, Mr. Gent, the defendant, showed witness and his father plaintiffs' ewer. and a set was sent to witness's works whieh had not the registered mark on. A eopy was made of that set, and the goods were decorated and sent out for sale. Subsequently witness's firm made another ewer to avoid infringement. Mr. Terrell: We say this is a mere colourable imitation. Cross-examined: The new design was subsequently registered as an original design. As part of the settlement with the plaintiff he had destroyed the moulds of the new pattern and that of plaintiffs' ewer. This closed plaintiffs' case. Mr. Walter, for the defendants, said there was no eontest here as to facts. It was a pure and simple question of how defendants ought to compensate the plaintiffs. Defendants admitted they had done wrong; they had offered an undertaking not to continue infringement and a certain sum of damages. The Act of 1907 provided that if a man failed to mark goods with the registered mark, that deprived him of all claim for damages till the person infringing knew of the registration. Defendants bought from Bailey 67 ewers up to June 21, 1912, when they first beeame aware of the registration; and since that time they had only sold 30, to which the plaintiffs were entitled to 15 per cent. on 30 times 4s. 6d., which would be about a guinea. They had offered an undertaking and a sum in damages, and he said in those circumstances the action ought never to have been brought. Mr. G. L. Gent, the defendant, said he had been in business for 36 years, and kept a very large stock. He remembered Bailey, senior, eoming to see him in 1911, and asking for a set of plaintiffs' design. Nothing was said at the interview as to what Bailey was going to make, and witness eertainly did not instruct him to make a copy of plaintiffs' design. Later on he saw at Bailey's works a copy of plaintiffs' ewers. Witness remonstrated with Bailey for having eopied plaintiffs' design, but Bailey said it was not a registered design; and as he could not improve upon it, he copied it. Witness was not aware till June, 1912, that the design was registered. At the interview with Mr. Winkle witness told the latter he only supplied Bailey with plaintiffs' set to show him what was selling, and not to be copied, and witness agreed not to buy any further copies of Bailey. At that time he had in stock several ewers bought from plaintiffs prior to witness being aware of the registration, and nothing was said about these. The total sales since he knew of the registration was 30 ewers. Cross-examined, he emphatically denied that he told Bailey to copy plaintiffs' goods; he had too much good feeling for the plaintiffs. When he found Bailey had copied the ewer, he told him it was wrong. He admitted he had bought some from Bailey since, but he aeknowledged he had done wrong in doing so, and had apologised. He did not think pottery manufacturers attached much importance to copyright, as a small variation took away the value of the eopyright. He considered he had a right to sell the goods he had in stock. This closed the evidence, and eounsel then addressed the jury on behalf of their respective clients. His lordship summed up the evidenee, and asked the jury to say if plaintiff had satisfied them that Mr. Gent had undertaken at the interview with plaintiff not to deal any more with plaintiffs' registered design. While the jury were absent, Mr. Walter argued the legal point as to whether plaintiff had a right to sue. He said the design was registered in the name of Winkle & Co. before it became a limited company; and as there was no assignment to the limited company the plaintiff had no right to sue. Mr. Terrell having replied, at this point the jury returned, and said they had found damages for the plaintiff for £3 12s., and had by a majority agreed that the defendant undertook not to deal with plaintiffs' design. The parties had agreed just before this to accept a majority of the jury. Mr. Walter said the defendant had paid £5 into Court, and had offered an undertaking, and therefore he asked for judgment for the defendants. Mr. Terrell said an undertaking was not an injunction, and it was the latter the plaintiff asked for by his aetion. His lordship eventually said he would consider his judgment and give it on Dec. 1.

Foreign Notes.

Mr. P. C. Korteweg has become the manager of the Royal Manufactory of Porcelain and Art Pottery, "Rozenburg," established at The Hague. This appointment will not affect the management of the "Pottery Rembrandt," Ltd., of Nijmegen, with which he is conneeted.

Infringement of a French Registered Design.—The Court of Appeal at Limoges has decided in favour of the Société Porcelaine Théodor Haviland in an action for infringement of their registered design No. 22,785, and has ordered the destruction of all the ware, moulds, transfers, &c., infringing the design. The actual infringer (an American). one of the defendants, was ordered to pay 5,000 franes damages to the plaintiffs, together with the costs of his own and co-defendants' case. On the other hand, the action for infringement against the co-defendants (manufacturers who executed the infringing design), was dismissed, there being no proof of their having acted in bad faith.

German Porcelain Manufacturing Companies.—The annual statistics relating to share companies in Germany state that 43 conceerns of this eharacter were engaged in the manufacture of porcelain and stoneware during 1911-12. The total capital of these companies amounted to 50,241,000 mk., of which 49,886,000 mk. were entitled to rank for dividend, although dividends were actually paid on only 4,686,000 mk. of such share capital. In the financial year 1909-10 there were 47 share companies in this business, and these paid dividends on a capital of 41,308.000 mk., whilst in 1910-11 46 companies paid dividends on 41,006,000 mk. These figures show a deerease in the number of share undertakings, coupled with an increase in the dividend-earning share capital. The reserve funds of the 43 companies aggregated 7,679,000 mk., and, on the other hand, their assets were pledged to the extent of 15,061,000 mk. debentures and 4,347,000 mk. in mortgages.

The Russian Glass-Making Industry.—The inflated economic situation now obtaining in Russia, which has endured for some years, has influenced the Russian glass industry very favourably. The number of glass works in Russia eontinues to increase, and the most recently established are equipped on quite up-to-date lines, though it has been found difficult to introduce mechanieal glass-blowing machines, even in the largest factories, on aecount of the relatively low eost of labour in Russia. The number of glass works in the country is now about 300, and their annual sales amount to about 40,000,000 roubles (£4,250,000). The inland demand is fully satisfied by the national factories. It is only in the coast territories of Siberia that foreign glass is imported, the cost of transport from European Russia being too high. In case the proposed unification of the Imperial and Finnish customs systems should take place, the glass works of St. Petersburg and district will suffer serious competition from the Finnish factories.

The Bohemian Kaolin Industry.—(From a Continental Correspondent.)—This industry, which has its chief centre in the Kammersprengel and Karlsbad district, was fully employed throughout 1912 to its fullest capacity. All the

mines and mills worked full time, and, in most cases, firms have paid highly satisfactory dividends. Kaolin is found principally in the Zettlitz-Karlsbad district, and also in the vicinity of Kaaden, Pomeisi, Poschezau, Brauersdorf and Wildstein. The leading firm in the world-famous Zettlitz-Karlsbad Revier is that of the Zettlitzer Kaolin Works, Ltd. ; it had a capital of 1,000,000 Austrian crowns, but that has now been increased to over 7,500,000 by the incorporation therewith of the firms of Zebisch & Pfeiffer, A. & E. Pfeiffer, of Zettlitz, the Karlsbader Kaolin-Industregesellschaft, of Vienna, and Ed. Lorenz & Co., G.m.b.H., of Zettlitz ; its sphere of activity has also been greatly increased by co-operations affected with several mills, and also factories at Merkelsgruen, making insulators. A report issued a couple of months ago, and now before us, states that the company has been highly prosperous, and has largely increased their mining property, whilst the costs of winning have been reduced ; this has also enabled the company to get access to beds of kaolin, which had long been inaccessible. Further means will be found in the near future to still further reduce the costs of winning the kaolin. As the company is now in a position to refine their own kaolin, further advantages will result for the shareholders. Several new shafts have been opened, no interruptions occurred during the whole year in the company's work, and Zettlitzer kaolin is quickly growing in popularity with home and foreign china factories. Most leading concerns assert that high-class chinaware cannot be produced unless Zettlitz kaolin be used. The poorer sorts are used in the paper trade. Hence, although all other industries suffered in 1912, due to the political and economic conditions, the kaolin industry made steady progress, and had an excellent year.

Pottery in the Belgian Congo.—The imports of crockery ware to the Belgian Congo have begun to acquire considerable importance of late. Whereas formerly enammelled utensils were almost exclusively used, the increase in the European population and the growing prosperity of the people in general have brought about a much larger demand, both for crockery and china ware. Not only are the Europeans buying these goods, but in the chief centres on the lower and middle Congo, the native servants, soldiers and workmen are also good buyers, and are abandoning the use of enamelled plates in favour of the crockery and china article : as a matter of fact, enamelled goods are now only selling for use by natives in the interior of the country. Crockery and china ware sell chiefly in the lower and central Congo. Above Leopoldville the risk of breakage is too great, so that enamelled goods are still preferred there. However, crockery ware is now selling also more and more in Coquillhatville, Lisala and Stanleyville. Formerly, plain white articles were only sold, but, at the present time, there is a smart demand for coloured table and coffee sets. Simple designs are preferred, such as one or two leaves or some simple motive. In order to secure a steady trade it is absolutely necessary to sell single pieces, to enable broken pieces of a set to be replaced. Table sets for three or six persons sell freely, but sets for twelve are not so much in request. Complete coffee and tea sets are not much asked for, as the people prefer to buy single coffee pots, tea pots, milk jugs, cups, saucers, &c. Coloured crockery ware pots and basins have a good sale, especially in ½ and 1 litre sizes, to the natives ; these are mostly job lines, with some fault in the manufacture which can be bought up in Europe at very low prices. Some businesses also stock plates and pots of fireproof clay (vulcanite), but they do not sell well, as they are too fragile. Washing sets, consisting of five pieces, sell very well, and buyers seem to prefer small lines and other simple designs. The old-fashioned round shapes are no longer popular. For exportation to the Congo these goods are packed in tubs with straw or hay. The import value is steadily increasing, and the countries of origin are Belgium, Great Britain, Germany and Holland. Crockery ware sells only in Sakania, Elisabethville and Etoile de Congo, and the hotel proprietors are the principal buyers. Here Great Britain is to the fore, Belgium and France following.

The Pottery Trade in Greece.—(From a Continental Correspondent.)—Porcelain ware is imported to an annual value of 200,000 fr., and the importation of white is much larger than that of coloured goods. The imports consist chiefly of very cheap articles. Coffee bowls are supplied by Germany in large quantities at 1.25 mk. per dozen. Tea and toilet sets come from France and Germany : crockeryware washing sets are English, and are supplied both plain and ornamented with flowers at from 3 to 24 fr., but the most popular lines cost from 3 to 12 fr. ; on these prices England also grants 10 per cent. France offers washing sets at from 5.25 fr. upwards free factory, charging also half the costs of packing and transport. So-called "stoneware" has a very large sale, and the coffee houses especially use large quantities of plain white coffee bowls which come from Germany and France. Table-sets, deep flat plates all white or coloured, also have a large sale, and the former come from Alsace. The Grecks attach special importance to a good glaze, and this point should always be borne in mind. The plates are supplied in sizes of from 19 to 23 cm. diameter at from 1.20 to 1.35 fr. per dozen. The coloured plates come from France and England and are of similar sizes, but cost from 1.00 to 1.40 fr. per dozen. Four to six months' credit are usual in this branch ; the costs of transport are charged to the buyer at 18 fr. per ton, and the packing at 8 to 10 fr. per cask. Each cask contains 60 dozen plates of 23 cm. diameter and 80 dozen plates of 19 cm. diameter. Pottery ware is largely made in Greece itself, but certain goods still continue to be imported from Austria ; however, the trade is declining. It is restricted to jugs and bowls, and a few flower vases and pots. The Piræus is the centre of the Grecian pottery industry ; it is an ancient industry in this country, and formerly had its centre at Syra. The crockery ware industry is only two years old ; it supplies table sets, jugs, and so on. The Greek glassware factory produces heavy tumblers, water bottles, lamp glasses, sugar basins, fruit dishes, and other current lines. It makes lamp chimneys in Nos. 5, 7, and 11 under the name "Wien," and Nos. 8, 10, 12, and 14 under the name "Kosmos" ; they are sold at from 10 to 15 lepta wholesale, whereas the foreign chimney of very fair quality costs from 5 to 8 pfg. Although it is now impossible to import heavy pressed glass tumblers, a strong import trade is done in the finer lines of light make, and Austria is making considerable progress in this direction. At present fashion is favouring light conic glasses with engraved garlands and flowers on the brims and with thin bevelled lines. Glasses with transferred flowers and wreaths also have a sale. Of other glassware which is freely imported we may mention flower vases, fancy suspension lamps, sweetmeat dishes, fruit dishes, trays for visiting cards, balls for chandeliers, lamp shades, and electric light glasses. Both plain and coloured goods are sold, Austria doing best, but she is beginning to feel German competition more and more. Plain goods sell best, as coloured lines have to pay duty to a higher extent. Bottles for Cognac, beer, wine and mineral waters also have a good sale in Greece, and the trade is increasing ; about 45 per cent. is supplied by Austria, the balance coming from France, Holland, and Germany. In larger coloured flasks and carboys Holland does most.

THE BEHAVIOUR OF GLAZES IN FIRING.

UNDER the heading "Mere Tautology," the following contribution, by Mr. W. Thomason, F.I.C., of the Royal Doulton Potteries, appears in the latest number of the "Transactions" of the English Ceramic Society :—

Dr. Mellor writes in the "Transactions of the English Ceramic Society" paper of Sept., 1912 :—

> If a given glaze mixture be fired under such conditions that the containing vessel is not attacked, and nothing is lost by volatilisation, it is perhaps mere tautology to say that the same result can be obtained, however the mixture be compounded, provided the ultimate composition be constant.
>
> The case is very different if similar glazes compounded in different ways be fired on ware so as to produce glazes to satisfy commercial requirements.

And again he says :—

> In a general way it can be said that leadless glazes are far more sensitive than lead glazes to the way in which the glaze is compounded, and fritted lead glazes are in turn more sensitive than glazes of the same ultimate composition built up with raw lead. Consequently, the way a glaze matures is determined not only by the way it is compounded, but by the physical condition of its constituents.

He goes on to apologise to his hearers for emphasising these facts, but says that none the less the facts were contradicted by witnesses before the recent Home Office Committee on lead and dust. He deplores the fact and adds that "he hopes it is neither unkind not discourteous to infer that the few sceptics are ignorant of the relevant facts and are, therefore, not in a position to instruct."

Now it appears to me that I may have been one of the unfortunates thus referred to by Dr. Mellor, and, though it is not my province to instruct, I do wish to make such defence as I may of the evidence I gave before that Committee—not of the evidence it might be supposed I gave from perusing Dr. Mellor's article. On the whole I think it would perhaps have been worth Dr. Mellor's while to have read my evidence before objecting to it in such strong terms. From a perusal of his paper it would appear that my view was, that provided the ultimate composition were maintained nothing else mattered in the way of glaze construction. What, in fact, I did say, was that the ultimate composition was the dominant factor, but that certain canons had to be observed with a view to the prevention of difficulties in dipping.

It was also explained that the borax frit of these clear earthenware and china glazes contained the whiting, and that another reason for the existence of this borax frit was to render the borax insoluble in water—or largely so.

The two conditions were made when under examination by Mr. Harcourt, but it must be admitted that they were made rather as a matter of chance than for any definite reason. It was chance, because the examination was directed in the main upon the lead content of the glaze, and because it would hardly have occurred to me that the contrary could possibly be the practice on account of the frothing which would necessarily occur in a glaze containing raw calcium carbonate and a borax frit, which partially softens below the temperature at which the calcium carbonate loses its carbonic acid.

However, these points were made, and made quite clearly, and I was considerably surprised to find that Dr. Mellor made use of this very calcium carbonate argument to refute what I had said, being apparently unaware of the reservation which had already been made about this particular substance. At that time, of course, the evidence had not been published, but it is now an old story and full details are in the hands of any person interested in the question. Consequently, I think you will agree with me that it is a curious basis for an attack on my evidence to start by assuming the exact set of conditions which in that evidence I had specially ruled out.

But Dr. Mellor does this, and indeed, he goes further, and in Item "4" of his paper he includes soda ash along with the borax and whiting in the imaginary glaze with which he opens his paper.

The paper as a whole presupposes such extreme ignorance on the part of glaze makers that really it is rather difficult to reply to it, and on going fully into it I find that in my evidence before the Committee, to have properly safeguarded myself, I should have added that the most essential canon of all is that after the glaze-maker had ascertained by careful chemical analysis that the raw and fritted glazes were in fact of the same ultimate composition, he should use his best endeavours to prevent himself becoming demented in all other matters of glaze constructior and of pottery. For instance, he must not put in his lime as whiting, his borax as such, and also some sodium carbonate—all without fritting . . . and since fineness of grinding has its importance he must not conclude that, say, a 40 mesh will do instead of the 160, or finer, mesh he may have been in the habit of using.

He must not do all these things and expect to get a glaze which, to use my critic's own phrase, "shall satisfy commercial requirements."

Having not done the above foolish things he shall not alter the composition and grain of his "body," he shall not either cause his kilns to hang fire for a week, or rush up like a laboratory gas furnace, and he shall not, if he has been in the habit of firing with an oxidising flame, so muffle his fires that his flame becomes mainly a reducing one.

Now simply from having come to the conclusion that lead bisilicate could properly substitute white lead in the manufacture of an earthenware glaze, I did not think it necessary to include all the above warnings in my evidence, nor do I yet think it was necessary in spite of the possibilities raised by Dr. Mellor.

At the Lead Committee the opponents of insoluble lead found their chief success on the supposed special action of raw lead in a glaze, upon the body of the ware upon which it is fired. From their point of view it was a good move, and the speciousness of the claim was difficult to establish before a committee of non-technical men, or rather whose only technical men were from the start opponents of insoluble glazes.

If you gentlemen of our Society will be good enough to read my evidence you will find that I make no denial of an intermediate zone, partaking both of the properties of the glaze and body, but what I do deny is that this zone depends in any way upon the glaze having before firing contained raw lead oxide or white lead.

It is true that photographs were produced for the benefit of the Committee purporting to show wide differences in the degree in which the body is attacked by glazes wholly raw as to lead and wholly fritted as to lead. I am glad Dr. Mellor does not make use of them. It would not be difficult to make photographs purporting to show exactly the opposite effect.

Let us consider the glaze (No. 11) to which Dr. Mellor refers in his paper divested of all its absurd details of construction, and made up from white lead, a suitable borax frit and mill mixture, which mill mixture is, of course, highly silicious. Now, does anybody suppose that the raw lead of this glaze will attack the hard body of the biscuit on which it lies, but with which it has very little contact, while in the most intimate contact and in a fine state of division and in an excess of 7 molecules SiO_2 to 1 of PbO there is all the silica and alumina that

the lead requires for the formation of a glaze. Is it not absurd to suppose that at a very early stage of the firing such action on the body can go on to any appreciable extent. Yet if Dr. Mellor's point is to be substantiated this special action must go on at a very early fire, since at quite an early fire the raw lead certainly frits itself and becomes as other fritted lead.

To me it appears so evident as to require no demonstration that the first result of firing must be to promote action between the bases and acids of the glaze itself.

However, as the temperature rises, and more and more of the acids of the glaze are combined with the bases, it must happen that the attack of glaze on body will increase and will be at its maximum when the glaze is mature.

If I am right in this the initial state of the lead has no importance when we are considering the attack of glaze on body, but let us see how far Dr. Mellor's argument agrees with this proposition.

In Item 3—raw majolica glazes—he says that lead oxide in contact with silicious materials begins to form fusible silicates below 700 deg. C. Consequently, if raw lead as such has any effect it must be below that temperature, as from that point it ceases to be raw lead. So much, I think, is plain.

If Dr. Mellor be right there should be conspicuous adhesion of glaze to body at this temperature when the glaze is of raw lead, but no such adhesion when it is made with lead bisilicate.

But a pottery has no kiln burning to so low a temperature, so let us stretch a point and carry on to gold kiln fire, about cone 015, so as to give the glaze every opportunity of producing this special raw lead effect.

The experiment can be made by anybody who is sufficiently interested to dip a few tiles or cylinders in two earthenware glazes of proved identical composition, one compounded with white lead and one with lead bisilicate, and place both in the gold kiln.

I can say from personal experience that at this temperature the adhesion of glaze to body is identical, whether the glaze be raw or fritted, and in both cases it is so incomplete that the presence of a dry colour such as matt blue between glaze and body is often sufficient to prevent this adhesion.

The attack of glaze on body, then, we may assume, has hardly begun at gold heat, but long before that point all raw lead has disappeared from the glaze, consequently the attack of glaze on body is not a function of the raw lead which the glaze originally contained.

I do not know whether the Society will admit me to be right in this conclusion, but frankly I see how no other conclusion can be reached.

Now let us consider my suggestion that the attack of glaze on body is mainly a function of the later stages of firing and ascertain if possible how far Dr. Mellor's paper agrees with this proposition. In Item "9" he shows photographs of a glaze which crazed at bar 17, crazed less at bar 22, and practically did not craze at all at bar 23. He rightly ascribes this to the action of glaze on body, but he will hardly expect us to believe that between bars 17 and 23 there remains the very slightest trace of raw lead in the glaze mixture; that is to say, attack of glaze on body goes on mainly when the glaze has reached maturity, and is very marked when, as in this case, it has been fired past maturity, which is precisely the point I made before the Committee.

Perhaps it is labouring a question which is already disposed of, but a familiar object in most potteries is a frit kiln, and from a study of this kiln we find just such action to have gone on as is proved above.

No matter what the frit being made, whether a lead frit or a borax-lime frit, the heaped-up level of the raw materials is of course much above the level of the frit as it is ready for withdrawal from kiln. Observe the conditions of the brickwork near the level of the raw material. If there be any special selective action upon the silicate of the brick by the raw bases, such action must take place at an early fire and show itself near the raw material level on the sides of the kiln. Is this action ever seen? Of course it is not! The brickwork at that level is glazed and no more; but at the level to which the frit settles down when mature, or reaching maturity, much chemical action has gone on and the bricks are rapidly eaten away.

On going through Dr. Mellor's paper again I am almost afraid I have misread him. I cannot find that he specially mentions the action of raw lead as such on the body of the ware, although he implies it. If he does not mean that, he cuts adrift the sheet anchor of himself, for there the special action of raw lead was much insisted upon; in fact, it was supposed to work miracles in the way of rendering "non-crazing" glazes which otherwise would have crazed. If he withdraws from that position we are getting on! If he doesn't he hasn't a leg to stand on!

Now let us examine some other points of Dr. Mellor's criticism! It appears from his paper that my contention about the ultimate composition being the dominant factor is put further out of court by the fact that the surface of a lead glaze is dimmed by being over-fired owing to the volatilisation of lead from this surface.

But surely by the time a glaze has been over-fired no raw lead remains. Is it not evident that by that time all is fritted, and if so how does the result of over-firing affect the question? If, on the other hand, some raw lead remains, which it doesn't, would this raw lead be less liable to volatilisation than if it were already converted into a bisilicate? Of course it wouldn't, but it would produce an excess of that volatilisation which Dr. Mellor reasonably argues spoils the surface of the glaze.

He asserts that raw lead glazes are superior to fritted glazes of the same composition, for the reason that the raw lead glazes mature more rapidly than the latter! No samples are produced in support of this argument, which sounds rather remarkable when we remember that the reactions of the glaze are already in part effected in the case of the fritted glaze. However, having made the assertion, he proceeds to contradict it shortly afterwards by stating that leadless glazes mature the more rapidly the more completely they are fritted. He remarks that the two statements are not incompatible, but it is evident that the second seriously weakens the force of the first.

Just one more point is the statement that even lead glazes attack with difficulty vitreous bodies, and that for this reason such bodies are difficult to glaze without crazing. Is there not in addition a quite different reason for this difficulty? Is it not a fact that the chief agent in the prevention of crazing is the use of much flint in the body, and is it not a fact that a really vitreous body is deficient in this flint? I do not think there will be two opinions on this matter.

Before leaving the question, however, let us see how Dr. Mellor's various points hang together:—

(1) He says raw lead glazes are superior to others because of their special attack on the body, and this special attack on body produces an intermediate zone which prevents crazing.

(2) The action of glaze on body is slight when body is vitreous.

Yet in 1907, before the Society of Chemical Industry, he produces a photograph showing the action of glaze on body at its best. But this is on a Berlin porcelain crucible, of which the glaze is leadless, and of which the body is vitreous. This contradicts his two points in one example.

Of course, neither glaze nor body is at all like a North

Staffordshire product, but I think the instance shows pretty clearly that the attack of glaze on body is not a special function of lead, whether raw or fritted.

Now leaving for the moment the paper which has caused me to trouble you with this one, let me recapitulate the evidence I really did give before the Committee :—

(1) It was claimed that when two earthenware and china glazes of identical composition, but varying essentially in that—in one case the whole of the lead is raw, and in the other is bisilicate, these two glazes from gold-kiln temperature upwards matured identically and finished together, and samples were produced to establish this, which they did effectually.

(2) It was shown by exhibiting these glazes on different bodies, some designed to produce heavy crazing, some slight crazing, and some no crazing at all, that where one glaze crazed the other did also, and where one was sound the other was sound.

(3) By grossly over-firing, and maintaining the temperature for about three times the ordinary firing period, slight devitrification amongst other effects was produced, but equally in both glazes.

If Dr. Mellor wishes to pin me down to an assertion that in all glazes of the same composition, no matter how grotesquely they are compounded, they are bound to develop equally in firing, he is ascribing to me opinions which I have never held. But within the limits of the late inquiry I maintain that what I said was perfectly logical, quite good potting, and strictly in accordance with ascertained facts, and that nothing in Dr. Mellor's paper disposes of my evidence.

The fact is, that in these earthenware and china glazes he has very bad examples for demonstrating the differences which may arise, owing to the physical state of the glaze materials.

It is, no doubt, true that Bristol glazes of the same composition may vary considerably in their behaviour in firing, according to the materials used in their composition, most of which are in themselves infusible except at very high temperatures, but even in these cases benefit, not disadvantage, arises from the use of certain portions of the glaze as a frit instead of all raw materials.

But in the case of the earthenware and china glazes the borax frit, which has a low melting point, and is common to both glazes, starts the reaction at an early stage, and in an ordinary kiln the difference between a raw lead and fritted earthenware glaze is negligible from a very early fire indeed, and in so far as there is any difference the advantage lies with the fritted, not the raw glaze.

For the demonstration of glaze action on body Dr. Mellor is again unfortunate in these glazes, except in the case of deliberate over-firing. He is unfortunate for the reason that the glaze is applied to a hard-fired biscuit, and the firing goes on in quick kiln, both of which conditions are inimical to the formation of any considerable buffer stratum.

But to my mind the most unfortunate feature of Dr. Mellor's paper is that he conveys the impression that the ultimate composition is only one of a number of equally important points in glaze construction. By so doing he does a great disservice to the particular branch of chemistry which he teaches, in that he allows the one cardinal point to be lost sight of, or at least hedges it round with so many minor points, whose importance he magnifies, that the existence of this cardinal point is in considerable danger of being forgotten.

Further, there is only one remark in the whole of his paper which points even remotely to a most serious matter! He mentions that boric anhydride escapes in varying degrees in the firing of a frit, according as it is introduced as borax, boric acid, or calcium borate. Of course, this has no bearing on my evidence before the Lead Committee, as I referred to the actual, not the supposed, composition of glazes; but if instead of making the points he did make, Dr. Mellor had impressed upon his hearers the necessity of using a little more chemical analysis and a little less of mere speculation, he would have done a service to the trade.

The fact is, that people who quarrel with a low solubility glaze, and find it gives results slightly inferior to what is supposed to be the same glaze with raw lead, in nine cases out of ten do not trouble to establish the identity of these two glazes by chemical analysis.

Now lead bisilicate is supposed to contain 65 per cent. PbO and 35 per cent. SiO_2, but as a matter of fact it seldom contains more lead oxide than 61 per cent., and may fall as low as 59 per cent., the difference being silica and alumina from the kiln bed. This change naturally makes the fritted less fusible than the raw lead glaze, unless allowance be made for the altered condition of the frit; but the difference is too often put down to the use of fritted lead as such, not to the change of composition.

In conclusion, I would say that if manufacturers would observe the above points, and in particular if they would assure themselves that the fired thickness of the fritted glaze they may be experimenting with be equal to the ordinary thickness on the ware of their raw lead glaze, we should find a very general acceptance of low solubility glazes in the earthenware and china trade, and a very heavy fall in the incidence of lead poisoning.

Belgian Glass Exports during the first three quarters of 1913 are recorded as follows in a return just published, The unit is 100 kilos., or 220·4 lbs. :—Window glass. 1,520,805 (the only decrease); plate glass, 314,048; other glass and glassware, 302,040. The "Frankfürter Zeitung" states that, owing to the recent falling off in the demand for window glass, the Belgian Window Glass Makers' Syndicate has been obliged to curtail considerably its output, which a few months back was put at 36,000,000 square feet. Consequently, this year's production may now be reckoned at about 30,000,000 square feet. At the moment the demand may be described as normally active, especially for foreign account, so that it is hoped there will be no need to take any steps towards the further limitation of production, the more so as it is anticipated that the new American customs tariff will have the effect of stimulating exports of window glass from European countries to the United States. As regards the Belgian export market, the trade with Japan has recently improved, and the orders from Argentina, Australia, and Canada are better than last year's; but there is a falling off in the trade with the United Kingdom and Eastern Asia.



Fragments.

¶ Subscribers' Appreciations :—From Scotland : "I value THE POTTERY GAZETTE very highly."——From Belfast : "We duly received your Diary and we thank you. It and your GAZETTE are very interesting."

* * *

¶ Though the pottery trades, as was pointed out in our last issue, are not dependent on Royal or noble patronage for their industrial progress, yet they are pleased to welcome a Duke (p. 1402) or a Marquis (p. 1406) at some of their social functions.

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¶ A Birmingham lecturer has made the important discovery, and (bold man!) has actually proclaimed it, that the pottery manufacturers are conservative. We are wondering whether or not to send down a special commissioner to the Potteries to investigate the charge.

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¶ There is surely sufficient magnetism (not to say magnitude!) about the pages devoted to pottery technics in our present issue (vide pp. 1393 and 1396). Whether it will "draw" the attention it deserves remains to be seen.

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¶ The greatest "Ceramic" event of the month in London has been the visit paid by the White Star liner of that name to the Tilbury Docks.

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¶ An advertising apothegm.—"Next t' bein' as good as your wife's folks ther hain't nothin' harder'n tryin' t' sell somethin' nobuddy knows you've got."

* * *

¶ It was a very thrifty man who, whenever he looked at anything, covered up his expensive glass eye so as to avoid wearing it out.

* * *

¶ "Another broken plate, Mrs. Biggs?" "Yes, sir. It seems to me that so much washing makes the china brittle-like." (From "Punch.")

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¶ A lady who found herself trapped in a burning house attracted the attention of a passer-by by throwing an earthenware teapot into the street. This use of pottery as a fire alarm may appropriately be recorded under the heading "Fragments."

* * *

¶ In the course of a lecture on the collection of antiques, delivered before the London Association of Accountants, at the Hotel Cecil, on Nov. 13, Sir J. Yoxall, M.P., cited the case of a gentleman who gave £2 10s. or £3 each for some cups and saucers, supposed to be real Bristol, which turned out to be painted forgeries worth about 2½d. each.

* * *

¶ Sir Ray Lankester, writing in the "Daily Telegraph," deals with the belief that geese were produced by barnacles. He says it has now been definitely shown that the story originated in very ancient times by the misinterpretation of decorative designs painted on earthenware plates and dishes by the Myceæan people of Cyprus and other islands of the Mediterranean as early as 1500 B.C. The artists amused themselves by letting their fancy freely play, and painted a row of geese gradually changing, as you pass from one to another, into a barnacle, the main lines of form and marking being really very similar, if you ignore the difference of size.

"CERAMICUS."

Trade Reports.

The Proprietors do not hold themselves responsible for the opinions expressed by Correspondents.

NOTES FROM THE POTTERIES.

(FROM OUR OWN CORRESPONDENT.)

THE manufactories are pursuing a quietly steady round of operations; there is no particular speeding up of production, and no marked slackening. The industry is in the position of neither enjoying a boom nor suffering a depression; business, indeed, seems to be in the transitional stage. Many of the Christmas orders have been completed, and others are nearing a finish; the year's business is, in fact, being brought to a conclusion. This sort of neutral position is not to be regarded with gratification; yet it is a matter for satisfaction, both from the point of view of employers and employed, that a steady course of production can be followed. There is but little actual unemployment, which promises well for the enjoyment of the coming festive season. It is certainly to be hoped that the winter will be passed without any great amount of short time, but in the light of present prospects that seems somewhat improbable. There is at present none of that buoyancy and briskness which in good periods marks the close of the year.

Regarding new business, the present demand is flat, and practically the only orders coming to hand are for the after-Christmas sales. Retailers who hold these sales, which appear to be increasing in number, naturally need some new goods to freshen up their stocks, and this necessity is the source of most of the new business manufacturers are receiving from the home market. Export business, too, is generally dull in tone, and there is no bright spot in this department of trade, unless it be the promised improvement in the United States market. Under the influence of the lower tariff and following the prolonged holding up of business, American buyers are making a better demand, and December and January should see some spirited ordering for the spring trade. The condition of the Canadian market is distinctly flat, and those on this side who are best able to judge say that things are very bad over there; in fact, there are neither orders nor money to be had. Locked up in investments, chiefly in land, money is exceedingly scarce; indeed, many think the danger of a financial crisis is very considerable. This is having its inevitable effect on the pottery trade; crockery is one of the last things people will buy when the purse strings have to be tightened. The Canadian position is the worst feature of the oversea business, but there is much room for improvement elsewhere. In regard to South America, which has proved a very good customer until the recent decline in exports, it is satisfactory to note that the monetary position in Brazil has taken a turn for the better.

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Analysing the North Staffordshire Railway Co.'s returns for the four weeks ending Nov. 16, it appears that there was a net decrease in receipts of £1,280, as compared with the same period of last year. Taking the figures for goods train traffic and canal tolls for the same period, there was a net decrease of £780. In the week ending Oct. 26 the total receipts showed a decline of £710, of which £410 was in respect of goods and canal traffic. In the following week, that ending Nov. 2, there was an increase in the total receipts of £110, but of that advance only £10

was in respect of goods and canal traffic. The third week, that ending Nov. 9, however, showed another decrease—£190 in total receipts and £90 in goods and canal traffic. For the fourth week, ending Nov. 16, the total traffic showed a decline of £490, of which £290 was accounted for by goods train and canal receipts.

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Expectations have been realised, and the colliery crisis which arose on the non-unionist question has been brought to a termination without either a general stoppage or cessation of work at individual pits. Manufacturers must feel gratified at the result of the negotiations, and the parties to the dispute deserve cordial congratulation. Both took a firm stand so far as their own points of view were concerned, but at the same time both displayed such reasonableness as permitted the unanimous acceptance of a compromise. That result was not reached without great difficulty, but the good relations which have long existed between employers and employed in the North Staffordshire coal industry stood the parties in good stead when the discussion reached the crucial stage. The coalowners refused to go so far as to prohibit non-unionists from working—which, of course, the union leaders desired—but having already made a genuine effort to bring the stragglers into the unions, they agreed to continue that persuasion when evidence was forthcoming that certain of their employees were outside the trade unions. They also consented to take steps to "deal with" those men who may fall into arrear with their union subscriptions.

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The terms finally offered by the North Staffordshire Colliery Owners' Association were submitted to the representatives of the North Staffordshire Miners' Federation and the three unions acting with them on Nov. 3, and were accepted in the following form, thus ending the dispute :—

The North Staffordshire colliery owners recognise that, in the interests of employers and employees alike, all the workmen shall be members of a trade union. They made a bona-fide effort to induce all their workmen to join one or other recognised trade union, and will, from time to time, on evidence being brought before them that certain workmen are not members of a union, continue those efforts. The owners will accept as such evidence names supplied by the recognised union representative, who shall also be enabled to obtain information as to the names of freshly engaged workmen. The coalowners will give the union all reasonable facilities for securing and maintaining the membership of the unions by allowing the distribution of leaflets and circulars, taking of show-cards, the collection of contributions, and posting of necessary notices after submission to the manager. In the event of men being found in arrears or out of the union, lists of such names to be submitted to the employers, and they agree to meet the federated unions, firstly before the end of the year, and afterwards quarterly, if necessary, to consider such lists and deal with them.

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The Duke of Argyll, who has honoured the Potteries with a visit during the month as the chief guest at the inaugural luncheon of the Pottery and Glass Trades Fair (reported elsewhere in this issue), is no stranger to the district or to the potting industry. He is related to the Sutherland family, so long domiciled at Trentham, where he was frequently a visitor. His mother was Elizabeth, eldest daughter of the second Duke of Sutherland, and he was born at Stafford House. As his Grace said at the luncheon, his first visit to the Potteries was as a boy of eight, but the visit by which he is best remembered was on the occasion of the opening of the new wing of the Wedgwood Institute at Burslem, that ceremony being performed by the Princess Louise and his Grace, then Marquis of Lorne. The Wedgwood Institute was opened in 1869, but it became inadequate for all its purposes, and what is known as the Brickhouse-street wing, where the technical school is chiefly accommodated, was erected at a cost of £7,000, and opened on Oct. 15, 1894. That occasion was memorable, not only for the presence of these distinguished visitors and the opening of the extension to the Institute, but also for the presentation by the late Mr. Thomas Hulme of his magnificent collection of Wedgwood and other Staffordshire ware, which is housed in the museum. The collection was accepted, on behalf of the town, by the Princess Louise, who afterwards unveiled a presentation portrait of Mr. Hulme, which now hangs in the museum. The Duke of Argyll is thus acquainted, not only with the present pottery products of the district, but also with some of its ceramic treasures of the past.

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The Potteries Museums have received many valuable gifts ; indeed, the best exhibits which they comprise are there owing to the generosity of citizens of the district. Some fifty pieces of Staffordshire pottery have been given during the month for permanent exhibition in the Hanley Museum by Mr. and Mrs. S. Montford. Mr. Montford was for a number of years an official of the Staffordshire Potteries Waterworks Co., and is an enthusiastic and well-informed collector of Staffordshire ceramics. The gift comprises Whieldon ware, salt glaze, coloured figures, cream ware, &c., and when displayed will occupy the whole of one museum case. The conditions of the gift are that it must always be shown together and remain in Hanley. There has just been placed on exhibition in the Hanley Museum a remarkably fine collection, principally of Staffordshire salt-glaze, which has been lent by Captain Luxmore, of Ashbrook Towers, Cheshire, a well-known connoisseur, who is sufficiently interested in the local museums to lend some 180 pieces from his splendid collection. Besides the salt-glaze which forms the chief feature of the loan, there are several interesting examples of the solid agate that was first made during the first half of the eighteenth century. These include teapots, a sauceboat, and a cup and saucer, the latter pieces being rare in solid agate.

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The salt-glaze lent by Captain Luxmore comprises examples of most of the styles through which this characteristically Staffordshire ware developed. There are specimens of buff body, with relief-stamped ornament in white ; small pieces, such as sweetmeat trays, which were stamped out of the clay with metal dies or moulds ; numerous examples of the style which came with the introduction of casting, such as pecten-shell teapots and teapots in the form of a camel or a house, or some other quaint design ; speciments of scratched blue and blue-dip, and a particularly representative show of enamelled salt-glaze. The latter includes some fine jugs, teapots and coffee-pots, with the Chinese, floral and other decoration common to this class of ware. A particularly fine jug bears the inscription "Cyder," which very obviously denotes its purpose. There is a quaint little teapot of white body with relief-stamped ornament, the ground being filled in with a rich crimson enamel. Another unusual piece is a teapot with a ground of blue and reserved floral panels. The collection also contains a piece of salt-glaze which is of interest, inasmuch as its enrichment includes size-gilding. It is very rarely that one finds gold in the decoration of salt-glaze. The earliest application was made by Wedgwood, when he applied size-gilding to the handles of agate vases and such like products. This salt-glaze

piece, therefore, was in all probability of late manufacture, or, it may be, was gilded experimentally long after its manufacture.

The contents of the residence of the late Mr. L. M. Solon, including much fine antique pottery and furniture, were sold by auction by Charles Butters & Sons, on Nov. 11 and 12, at The Villas, Stoke. It will be recalled that in November of last year—a few months prior to his death—Mr. Solon disposed of his unique collection of Staffordshire wares for a sum of £5,849, but in addition he possessed many other ceramic treasures, notably fine old porcelain and many examples of his own work in pâte-sur-pâte. These articles of vertu, together with the furniture made £2,600, so that the two sales realised an aggregate of £8,449. The porcelain comprised a variety of makes, both English and Continental, and good prices were invariably paid. The highest figure was £51 for a pair of vases of cylindrical shape, with underglaze blue decoration, dragon pattern. The most interesting feature of the sale was the disposal of numerous plaques in pâte-sur-pâte, the process on which Mr. Solon's fame as a pottery artist rests. These pieces realised remarkable prices, evidencing the increasing value which is being placed on specimens of this work. The highest figure paid was £47 for a plaque, "Tribute to Cæsar" (13½ in. by 6 in.); £42 was given for "Good Dreams and Bad" (11½ in. by 7 in.); £40 for "The Aviary" (10½ in. by 7in.); £31 for "The Balcony" (10¾ in. by 5¼ in.); £29 for "Heavy Burden" (10¾ in. by 5¼ in.); £27 for "Faux Pas" (10¾ in. by 5¼ in.). Nothing like so high a figure as £47 was paid for any of the pieces disposed of with the Staffordshire collection in November of last year. The top price then was £32 11s. for "Driving away the Wild Birds" (5½ in. round), the next figure being £23 2s. for "Bondage and Freedom" (8½ in. by 4½in.).

Municipally, November is the most important month of the year, and on this occasion it has certainly been packed with civic events. On the opening day there were the customary elections, and it is evidence of the apathy with which local government is here regarded that there were contests in only six out of the 26 wards. In connection with those elections, the only notable feature was that the Labour Party put forward three new candidates and managed to secure the return of one by a substantial majority—Mr. T. Thornton in No. 7 Ward, Burslem. It is often said that municipal elections should not be fought on political party lines, and Stoke-on-Trent adopts this argument, except so far as the Labour Group is concerned; but it would tend to the better administration of the borough if well organised parties of non-political character came forward and made the municipal elections real contests, instead of permitting anyone to take a seat on the Council, almost for the asking. With local taxation continually advancing, there is real necessity for the manufacturers and the best business men of the district to come forward and take charge of the municipal machine. On this subject Alderman Geen talked very straightly to a deputation who waited on the Stoke-on-Trent Council at their meeting on Oct. 30 and complained of the high rates. With this matter, however, I will deal later.

The month has witnessed the conclusion of Alderman Geen's Mayoralty, and on Nov. 10 he was succeeded in office by Alderman Philip Elliott. During the two years that Alderman Geen has occupied the civic chair he has displayed unlimited energy, and has brought his great ability and experience to bear for the benefit of the borough. His capacity for dealing with complicated finance is common knowledge, and his services during these early years of federation, when questions of immense financial difficulty have had to be solved, have been invaluable. His successor, Alderman Elliott, is a Fenton tradesman, a member of an old North Staffordshire family, and a gentleman of considerable experience in municipal work. For sixteen years he was a member of the Fenton Urban District Council, of which for the four years prior to federation he was chairman. His chief work has been in connection with education, both before and since the amalgamation of the towns. On the creation of the Stoke-on-Trent Education Committee in November, 1910, he was appointed chairman. He has displayed an active interest in the provision of the Pottery and Mining Technical School, and is chairman of the Governors of that institution. The customary Mayoral dinners have taken place during the month, and have proved interesting social functions, and also provided the opportunity for the discussion of local affairs. Alderman Geen entertained the Council, and the latter, in acknowledgment of his services, entertained Alderman Geen to a complimentary banquet.

The deputation referred to, which waited on the Stoke-on-Trent Council on the subject of the burden of the rates, comprised representatives of the North Staffordshire Chamber of Commerce and the various traders' associations in the Potteries district. They protested against the enormous increase in the rates, and pointed out that in the year prior to federation the average rates of the district were 8s. 3d. in the pound, whereas now they reached 9s. 8d., "forming a charge which constitutes a menace to the trade of the district and an intolerable burden." The deputation urged the Council to abstain from undertaking any avoidable expenditure and to exercise the strictest economy. Further, they suggested that the Council should endeavour to obtain from the Imperial Exchequer increased aid for local expenditure. In this latter connection, the recent promise of the Chancellor of the Exchequer that such services as education shall receive further assistance from national funds is welcome news, and its speedy fulfilment will be hoped for by all concerned in local government. Mr. W. Rees Jones, who first spoke on behalf of the deputation, submitted some interesting figures, which may be crystallised as follow:—Comparing 1910 with 1913, the indebtedness of the borough has increased by 11·18 per cent., while the rateable value has increased only by 2·52 per cent., and the product of a penny rate has increased only by 3·76 per cent. Comparing the Corporation expenditure in 1908-9 with the estimates for the current year, the expenditure has advanced by the enormous percentage of 18·84. Mr. Thomas Poole addressed the Council on behalf of the Longton and Fenton china manufacturers, who, he said, felt the rates to be a heavy burden, a great handicap in their business, and a menace to trade. This was particularly so in view of the facts that china manufacturers had to face severe foreign competition, and recently had had imposed upon them by the new Pottery Regulations a heavy capital expenditure and annual maintenance charge.

The reply of Alderman Geen, the then Mayor, was very much to the point. He sympathised with the views of the deputation, and regretted the burden which manufacturers and traders had to bear, but—to put it bluntly—he suggested that those who complained should come and do better than the present Council was doing. He reminded them that the elections were then about to take place, but he had not observed any desire on behalf of either large or small ratepayers to interest themselves actively in the affairs of the Corporation. The responsibilities on the shoulders of the Council were very great, and he had no hesitation in saying that from the most prominent

to the most humble member of that Corporation there was a desire to reduce the burden which had been imposed on the ratepayers. He invited practical, concrete suggestions from the deputation. In respect to the work the Corporation had to carry out, a non possumus attitude was all very well, but they wanted some suggestion ; they wanted the deputation to put into concrete form the policy they would recommend the Council to follow. "We on the Council," he added, "try to do our duty, and if we fail, then the remedy is in your hands ; put someone else in our place, and manage the Corporation affairs better than we are doing."

Observations by Mr. John Ridgway always and deservedly attract attention. In a recent speech as President of the Stoke-on-Trent Property Owners' Association, he broached two subjects of much importance, and one of them of distinct originality. First of all he touched on the question of the excessive prevalence of smoke in the Potteries atmosphere. For too long it has been the custom to regard plenty of smoke with satisfacton ; people are beginning to regard it otherwise. Smoke obviously indicates wasted fuel, but Mr. Ridgway put another point of view. The smoke nuisance, he asserted, retarded the prosperity of the district, and he considered before many years had passed the present system of firing would undergo a great change. Sir Henry Cunynghame had recently prophesied that producer gas would be the means by which firing would be done in the future. If that were true, and there were some indications of it, would it not do a very great deal for the prosperity of the district, and incidentally for everyone owning property in it ? By concentrating public opinion on the matter and helping to remove difficulties, they would, in the course of a few years, see some mitigation of what was practically a calamity. They had evidence that producer gas could produce good earthenware at a reduction of cost, and this was a matter for hopefulness.

The other subject Mr. Ridgway referred to was that of improved transit, and in particular, the necessity for better facilities in conveying goods to the ports. We have been content for so long to look to better waterways as the panacea for this particular ill that Mr. Ridgway's statement—that he did not attach much importance to the proposal of a great system of canals—comes as something of a surprise. He did, however, he said, attach the greatest possible importance to cheap and easy transit to the coast and the larger towns, and he suggested that if the present canals could be acquired by the Government, possibly with the assistance of the local authorities, for the purpose of making roads for heavy motor traffic, then what thy wanted would be accomplished : a competition would be set up between the railways and the new means of transit, which would be of vital importance to a district like the Potteries. Mr. Ridgway's suggestion is well worth considering by business men and legislators. It is certainly revolutionary, but the modern development of motor traffic has so revolutionised means of transit that the carrying out of the suggestion may be nearer than we imagine. I believe a company in the Potteries has already tried the experiment of conveying goods to the coast by motor lorry, but the experiment did not apparently meet with much success. Nevertheless, the motor has come to stay, and special motor roads—whether they replace the canals or are supplementary to them—are becoming practically a necessity.

There were some interesting references to the trade of the district at that pleasant social gathering—the annual dinner of the Burslem Association for the Prosecution of Felons. Mr. W. Rhodes spoke in an optimistic vein. It was said by some that they had reached a climax in regard to trade, but there were also those who agreed with him that they need not fear for the future. In February next they would be holding a fair, which would draw buyers from all parts of the world, and this would prove a great asset to the trade of the district. He spoke confidently as to the prospects of this innovation, and added that there was no reason why the fair should not be as successful as those held in Germany and other foreign countries. Mr. Warwick Savage, who was also hopeful of great things resulting from the Pottery Fair, went on to observe that he would like to see new factories built in Burslem. They had a good many works in the district which it was impossible to run at a profit ; they were utterly out of date, and manufacturers should seriously consider doing away with them, and substituting modern works and the most up-to-date methods. He contended that this was necessary in order to compete successfully with foreign manufacturers.

In a comprehensive review of educational developments in Stoke-on-Trent since Federation, which Alderman Philip Elliott submitted to the Education Committee at their last ordinary meeting, reference was made to the reorganisation of art instruction in the borough. In 1912, he said, two important steps were taken—the adoption of definite syllabuses and courses of instruction for students engaged in the local industry, and the formation of the Joint Advisory Committee on Art, representing the Education Committee, the employers, art directors and art masters. The scheme had been justified, and students were realising the advantages of following a definite and well-graded course of instruction. This year the Committee had proceeded a step further in appointing one responsible superintendent for the whole of the art instruction in the borough. This had made it possible to review the needs of the district as a whole. Day classes at Tunstall and Longton had been discontinued, the numbers in attendance entirely failing to justify their continuance. The work was being extended in scope, and some of the more specialised subjects were being concentrated. The whole result was to have more definite work to supplement the practical work by lectures, and to systematise the organisation and curriculum. The activities of the committee, he added, had resulted in an increased attendance at the schools of art, and it was confidently believed better work was being done for the district and the industry. Alderman Elliot, by the way, has been re-elected chairman of the Education Committee.

At a recent meeting of the Governors of the new Central School of Science and Technology, Stoke-on-Trent, it was announced that Fletcher, Russell & Co., Ltd., of Palatine Works, Warrington, had offered, through C. E. Ramsden & Co., Stoke-on-Trent, a gas furnace for use in the new school. The offer was considered, and accepted with thanks.

A concert of high artistic merit, and one that was deservedly well attended, was held in the Queen's Hall, Burslem, on Oct. 30, on behalf of the Pottery and Glass Trades Benevolent Institution. The far-famed North Staffordshire District Choral Society, under the baton of Mr. Woodall, contributed a number of part songs in their accomplished style to the great delight of the audience. The soloists were Mr. Charles Tree, the well-known bass, whose spirited and breezy interpretation of songs of that lighter order entirely captivated the fancy and appreciation of his hearers ; Mr. Wilfrid Hudson, a popular York-

shire tenor, whose pleasant voice and tasteful renderings added to the attractiveness of the entertainment, and Mrs. Norman E. Woodward, a local soprano with a high reputation which she fully maintained. Mr. W. Sherratt and Mrs. Emery were the accompanists.

At an inquest held on Nov. 18, relative to the death of a glost placer, named Samuel Oakes, aged 46, of Burslem, evidence was given that the man had worked in lead processes since he was a boy of thirteen. From July, 1912, till January last he was marked by the factory certifying surgeon "1 B," indicating that there were no signs of lead trouble, but that his general health was impaired. From February last till September he was marked "2 B," because he had developed the blue line. He became ill, and was medically attended from Sept. 10 to his death on Nov. 14. As the result of a post-mortem examination, doctors attributed death to kidney disease set up by lead poisoning, and a verdict was returned accordingly.

THE CORNISH CLAY TRADE.

(FROM OUR OWN CORRESPONDENT.)

THE china clay trade is once more pursuing its usual course, and the district is again humming with activity. There are possibly a few instances where men who had taken an unreasonable attitude in the recent strike are refused re-instatement, but even in this respect most of the firms are unwilling to hear anything more about the past and employment is being obtained for them. The stoppage for nearly three months had naturally depleted all the stocks at the various depots, and every firm appears to be taxed to the utmost at present. The Workers' Union are still prosecuting their campaign, and during the past month several social gatherings have been held, and three institutes are to be erected in various villages of the china clay district. Mr. C. R. Vincent, the principal operator of the recent strike, has removed to Cardiff, and a Mr. Joseph Harris, of Belfast, is now in charge.

The cost of the police during the strike has just been announced, and the sub-committee appointed by the Standing Joint Committee who have carefully gone into the matter, report that the total expenditure incurred is considerably over £5,789, but not exceeding £6,000. It was recommended that in accordance with the provisions of the Local Government Act, 1888, an additional 1¼d. in the £ be levied. This rate would be levied on the whole county with the exception of the boroughs of Truro and Penzance, which maintain their separate police forces.

The annual meeting of the Cornwall Geological Society has been held this month, and amongst the contributors were Mr. J. M. Coon, who delivered a paper on "China Clay and Stone," for which he was awarded by the Council a prize of £10. It will be remembered that a photographic sketch of Mr. Coon appeared in a recent issue of THE POTTERY GAZETTE. Mr. Coon also read an interesting note on a concretionary quality vein at the Bloomdale China Clay Works, St. Stephen's-in-Brannel.

The past month has marked a most interesting epoch in the history of Troy Town or Fowey, the principal shipping port of the china clay trade, in the recovery of their lost charter and the burgesses of that town are to be congratulated upon having such an excellent and go-ahead council. Mr. W. J. Graham, clerk to the Port, responding to the toast of "Prosperity to the Port," at the recent annual dinner of the Fowey Mercantile Association, remarked that twenty years ago no steamers ever came into Fowey but now ten or twelve arrived and left every day. There is every indication of a still greater increase in the future, as the china clay trade was expanding almost faster than facilities could be provided.

The new work which the West of England and Great Beam China Clay Co. are opening up at Hallew, near Nanpean, was the scene of a very serious accident a fortnight ago. In consequence of the company realising the advantages of the gas-winding engines for hauling the sand out of the deep clay-pits, they have installed a suction gas plant at Hallew. It was in connection with the preliminary trials of this winding engine that the incident happened. An empty waggon was being drawn up the incline, but the new rope appeared to be rather too stiff when reversed, and some slack got around the drum. Captain John Grigg and three other workmen endeavoured to alter it when they suddenly came into contact with the moving train wagon. Captain Grigg escaped with a few bruises, but a lad named Wilson Hore had to have his leg amputated at the thigh in consequence of the injury he received. The operation was performed at the local hospital, which is very largely supported by the clay workers throughout the district. Mr. M. F. Hitchins and Mr. G. H. Grenfell, who are associated with the West of England and Great Beam China Clay Co., have been recently appointed joint secretaries of the Hospital Maintenance Committee.

THE POTTERY AND GLASS TRADES IN SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

NOMINALLY the retail business in these trades has, for the past two months, been restored to the regular habitants of the cities and towns. The coast and spa season practically ended two months ago, but the settled all-the-year-round places of retail business have not as yet derived any very definite measure of advantage from the circumstance. The chief cause thereof has no doubt been the too early advent of meteorological conditions of a wintry character. Our weather during the past five or six weeks has furnished a sampling of wintry qualities inclusive almost of all except that of snow, perhaps; indeed, snow itself cannot wholly be rated as an exception, for although it has not yet actually fallen upon the lower surfaces, the tops of all the mountains and of some of the hills have already been more than once capped afresh with white. There has been some little show of frost, too, even in the low-lying places, but the prevailing condition inimical to our retail trades has been too frequent rainfall, now and again accompanied by gales of considerable severity and low temperature. Weather conditions of late have been indeed at about their worst from the shopping point of view, and in consequence thereof shopping in many trades, and particularly in the china, earthenware, glass, and crystal departments, have got much into arrear. This is the more unfortunate, for, since the recent coming into force of the new House Letting (Scotland) Act, removals, or "fittings," have greatly increased in the month of November (formerly these mainly were confined to the one chief annual term of June), and thus have shifted good part of the china, glass, and earthenware furnishings (or refurnishings) to that period. If fairly dry weather were to prevail here from now on to the close of the year, our retail traders, from that as one of the causes, would be bound to be well taken up with sales.

As was the case at last report, the wholesale merchants and their travellers have during the intervening month been meeting with varied fortune in regard to the spontaneous incoming of orders from customers and with respect to orders booked by the travelling representa-

tive when on the road and working the various districts. The northern regions of the country, including the islands, and likewise the Lews, Skye, and the rest of the Hebrides fringing the north-west, have, during the present fall, been at a disadvantage from the point of view of our own trades, and also from that of most of the other ordinary industries. Over the north and north-west generally the season's sea fishing results have shown a marked shortage, and money is now less ready in consequence thereof. Isolated points here and there have come out better, but as regards the general outcome in these regions, the fishing turned out poorly. Around the more southerly coast line (Fife to the English borders on the east, and the Clyde to the Solway on the west) the fishing conditions were largely reversed, the summation at most of the main fishing havens actually exceeding the average. As a consequence, in the southern half of the country new china, earthenware, and glass orders have been coming in much more freely.

The call for glass goods (bottles, tumblers, and such like) during the past month has been on the quiet side, but no doubt there will be an increased activity in this section between now and the commencement of the end of the year annual observances. The department of sanitary ware manufacture and consumption, continues to promise fairly well, but it will no doubt be into the spring of next year before any further improvement can be expected.

The prospects for the Christmas and New Year trade in these industries are somewhat nebulous at this comparatively early date. On the whole, in the outlook from the point of view of the retailers, no great things are expected.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, Oct. 16.

AN important step in the direction of encouraging local industry has been taken by the Commonwealth Postmaster-General in connection with the supply of insulators for telephone line construction. For several years Australian manufacturers of these articles have endeavoured to obtain at least a share of the Postal Department's business, but they have been unable to compete with oversea firms on the question of price. However, some weeks ago tenders were invited for a further supply of insulators, and so little difference was found in the quotations submitted by the Commonwealth Art Pottery and Insulator Co. and outside firms, that the Department had no hesitation in patronising the local industry.

The present order comprises 250,000 of the B type of insulator, 10,000 of the A type and about 30,000 tubes. While this is not extensive from a monetary view point, the amount involved only being a little over £3,000, it is particularly gratifying to Protectionists as an evidence that the apparent prejudice against Australian made insulators no longer exists. The B type insulators have passed exhaustive Governmental tests, and the order for 10,000 of the A type is in the nature of an experiment.

The prospects of the industry may be gauged from the fact that the Department's requirements for the present year total 1,100,000 insulators. Tenders are now being considered for three years' supply, and it is understood that further encouragement is likely to be given to local manufacturers.

Values of imports for the whole of Australia for the first eight months of the current year, compared with the corresponding period of last year, include the following items of trade interest:—Earthenware and china, 1913, £273,753; 1912, £275,027—a decrease of £1,274; glass and glassware,1913, £409,427; 1912, £380,582—an increase of £28,845.

The Gazette.

Limited Companies: Appointments of Receivers; Resolutions and Notices as to Winding-up; Petitions; Orders and Official and other Notices.

COLLEY (ALFRED) & Co., LTD., Tunstall.—J. P. Brodie, Lloyd's Bank-chambers, Burslem, accountant, appointed receiver, Nov. 5.

DUKES (STOURBRIDGE), LTD. Resolved Nov. 21:—That the company be wound up. R. T. Hall, 86, Colmore-row, Birmingham, liqr.

NONPOROUS TILE CO., LTD., Birmingham.—J. W. Barratt ceased to act as receiver, Oct. 15.

Notice under Assignment.

HEATH THOMAS, Albion Works, High-st., and 42, Chaplin-rd., Longton, earthenware manufacturer. Claims to Richard Ecroyd Clark (of the firm of Bourner, Bullock & Co.), 17, Albion-st., Hanley, trustee.

Petition for Discharge.

COWAN BROS., 70A, Dalry-rd., Edinburgh, and 123, Leith-walk, Leith, wholesale china, glass, and hardware merchants, and LOUIS COWAN, 16, Mertoun-place, Edinburgh, sole partner. Agent, W. Geddes, 13, Rutland-square, Edinburgh.

Notices of Dividends.

DICKINS JOSEPH G., 108, Hoe-st., Walthamstow, late 373, High-rd., Leyton, china and glass dealer. Supplemental, 2s. 1d., at Bky. Ct., any day except Saturday, between 11 and 2.

WARDLE FRDK. C., late trading at Stoke-on-Trent as a debt collector, under the style of Potteries Accountancy Co., and also as a china manufacturer at Longton, in co-partnership with, &c., as &c. Supplemental, 2s. 10½d., at O.R.'s, Chester.

Circular.

EASTERN GLASS CO. (James Johnston, sole partner), 184 Dalmarnock-rd., Glasgow. The following circular has been issued:—Chambers, 68, West Regent-st., Glasgow, Oct. 17, 1913. Dear Sir,—The committee appointed at the meeting of creditors held here on Tuesday last, 14th inst., have now reported that they would recommend the creditors to accept an offer of 5s. per £, payable as follows, viz., 2s. 6d. cash, 1s. 3d. in three months, and the remaining 1s. 3d. in six months, the latter both from 15th inst. Mr. Johnston, the sole partner of the above company, has authorised us to make the foregoing offer to the creditors, conditionally upon their all accepting same within seven days from this date, and proceedings taken by any of the creditors being withdrawn. Mr. Johnston is unable to give security for the two instalments of composition, but the committee have kindly agreed to exercise supervision pending these being met. We enclose form of acceptance, and shall be obliged by your signing and returning same to us at your earliest convenience.—We are, yours faithfully, (signed) Honeyman & Henderson. P.S.—The meeting arranged for Tuesday first, 21st current, will not now, of course, be held. (For state of affairs, &c., see our issue of Nov. 1.)

Bankruptcy Proceedings.

COLCLOUGH CHAS., Sutherland Works, Wharf-st., Longton, and 18, Wise-st., Dresden, Longton, earthenware manufacturer, &c. R.O., Nov. 5. This debtor attended at the Town Hall, Stoke-on-Trent, on Nov. 25, for his public examination on accounts showing liabilities of £247, and a deficiency of £207. It transpired that the debtor started trading at Sutherland Works with two partners, a brother

POULENC'S LIQUID GOLD

2 GRANDS PRIX—PARIS, 1900. | 2 GRANDS PRIX—ST. LOUIS, 1904.
FRANCO-BRITISH EXHIBITION, LONDON, 1908.—MEMBERS OF JURY (HORS CONCOURS)

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Manufacturers of . . .

TRADE MARK:

Enamels & Colours for Ceramic

COLOURS UNDERGLAZE for CHINA.
COLOURS UNDERGLAZE for EARTHENWARE.
PREPARED OXIDES for COLORATION of ENAMELS.

LES ÉTABLISSEMENTS POULENC FRÈRES, MANUFACTURING CHEMISTS, 92, RUE VIEILLE DU TEMPLE, PARIS.

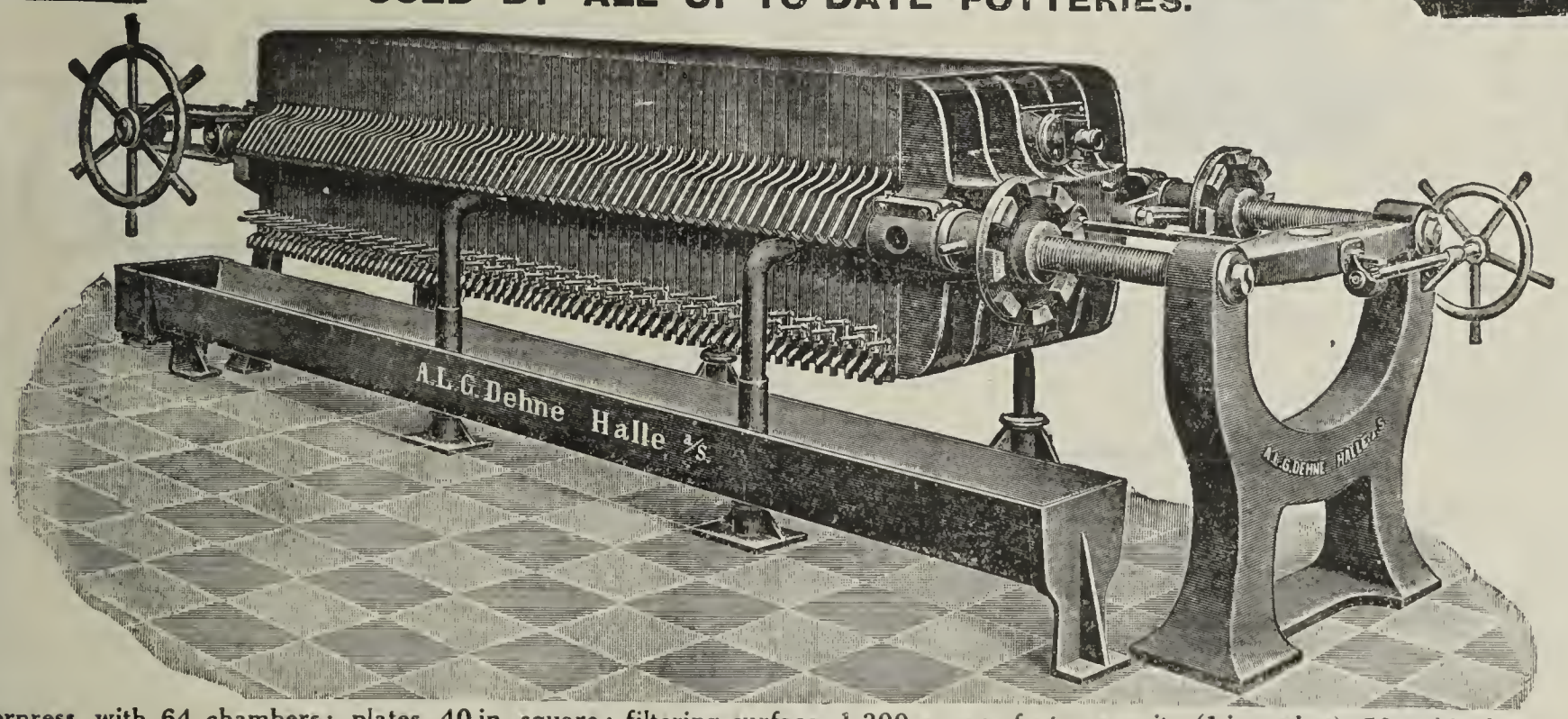
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Represented in STAFFORDSHIRE by Messrs. J. G. GREGORY & SONS, Liverpool Road, NEWCASTLE, Staffs.

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FILTERPRESSES

USED BY ALL UP-TO-DATE POTTERIES.

NEARLY 20,000 SUPPLIED.



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Filterpress, with 64 chambers; plates, 40 in. square; filtering surface, 1,200 square feet; capacity (1 in. cakes), 50 cubic feet; with patent angle-lever shutting arrangement.

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and another, the joint eapital being £35. They left the firm about three years ago without receiving anything in respeet of their shares. The debtor then had the whole eoncern, and he gave a bill of sale to a Mr. Edwards, and received £100 in eash. Debtor denied that he had represented that he was solvent when he gave the bill of sale. The examination was closed.

New British Patents.

The following list has been compiled expressly for "THE POTTERY GAZETTE" by G. F. REDFERN & Co., Chartered Patent Agents, 15, South-street, Finsbury, E.C., and 10, Gray's-inn-place, W.C.

Applications for Letters Patent.

CERAMIC MASSES, No. 24,304.—T. Moses. Process for manufacturing ceramic masses. Oct. 27, 1913.

COMBINED EGGCUP AND PLATE, No. 23,887.—F. Cowburn. Eggcup and plate combined. Oct. 22, 1913.

GLAZED COMPOUNDS FOR CERAMICS, No. 24,691.—O. Volkel. Manufacture of glazed compounds for ceramics. Oet. 30, 1913.

HANDLES AND FASTENINGS FOR EARTHENWARE VESSELS, No. 24,684.—C. E. Challis. Handles and fastenings applicable to earthenware and enamel ware vessels and the like. Oct. 30, 1913.

HOT WATER JAR, No. 23,896.—J. McCullagh. Hot water jar. Oct. 22, 1913.

MANUFACTURE OF POTTERY, No. 24,164.—R. Theumer. Manufacture of pottery. (Con. date Oct. 28, 1912, Austria.) Oet. 28, 1913.

POTTERY MATERIAL FROM FURNACE CINDERS, No. 24,543.—M. Chiapponi. Process for obtaining from furnace cinders a material similar to ordinary pottery or the like for various industrial applications. Nov. 29, 1913.

SEATING FOR BASES OF GLASS, CHINA, AND EARTHENWARE UTENSILS, No. 24,313.—G. Taylor. Protective shield or seating for the bases or bottoms or feet of glass, china, earthenware and the like utensils. October 27, 1913.

SHAPING ARTICLES OF POTTERY, No. 24,869.—F. Haneock. Apparatus for shaping articles of pottery. November 1, 1913.

TEAPOT LIDS, No. 23,633.—W. A. Dotchin. Teapot lids. Oct. 18, 1913.

TILES, &C., FOR ROOFING, No. 25,019.—H. Gadd and C. V. City. Tiles, slabs, and the like, for roofing and other eonstructive purposes. Nov. 3, 1913.

TUMBLERS, &C., No. 24,924.—H. J. Clark. Tumblers and other drinking vessels. Nov. 1, 1913.

TUNNEL DRIERS AND KILNS FOR CLAY, No. 23,174.—A. R. Stevenson. Tunnel driers and kilns for drying products of clay and the like material. Oct. 14, 1913.

VESSELS FOR MAKING TEA, COFFEE, AND THE LIKE, No. 24,037.—F. Melton. Vessels for making tea, coffee, and the like. Oct. 23, 1913.

Specifications Published.

1912.

22,303.—Mechanical Process Manufacturing Co. & Corl. Glassware forming mechanism.

27,317.—Prebisch & Kohler. Machines for making ridge-tiles.

29,766.—Arrowsmith & Arrowsmith. Pug and wad mills employed for making forms, lengths, saddles, pins, and the like for potters' use.

29,313.—Johnson & William Boulton, Ltd., Ball or pulverising mills employed in the grinding of potters' and other materials.

1913.

1,035.—Turner. Infuser for teapots and the like.

9,956.—Whiteman (Fairmount Glass Works). Making hollow glassware.

9,957.—Whiteman (Fairmount Glass Works). Glass-blowing machine.

16,851 and 10,854.—Bolton. Shaping of pottery.

11,836.—Fritsch. Ornamenting glass articles.

13,072.—Burley. Manufacture of fire bricks or blocks.

618.—Haag. Tile.

12,631.—James Pascall, Ltd., & Pascall. Air tight covers for jars and bottles.

Designs.

The following is a list of proprietors of designs entered on the Register in Class 4, which includes "Articles composed wholly or chiefly of glass, earthenware, or porcelain, bricks, tiles, or cement."

625,236.—Wilsons & Mathiesons, Ltd., Carlton Works, Armley, Leeds.

625,423.—A. J. Wilkinson, Ltd., Burslem.

625,456-7.—J. Aynsley & Sons, Longton.

625,614.—Wileman & Co., Foley China Works, Longton.

625,872.—H. H. Blanchford, Alton, Rohais, Guernsey.

626,128.—Burgess & Leigh. Middleport Pottery, Burslem.

626,136.—O. A. Pfeifer, 6, Dyers-buildings, E.C.

626,170.—F. Tuhten, Wolfe-st., Stoke-on-Trent.

623,881-3.—R. Powley & Sons, Ltd., Handel-st., Sunderland.

624,849, 625,893.—The International Bottle Co., 108, Fenchurch-st., E.C.

624,957.—Peters & Doring, Spaldingstrasse 210-212, Hammaburg, Hamburg, 15, and Corporation-chambers, 54, Lower Thames-st., E.C.

625,340.—W. Southworth, 14, Rue Taitbout, Paris. Address for Service c o Day, Davies & Hunt, 321, High Holborn, W.C.

625,615.—Wadekind & Co., 4A, St. Dunstan's-alley, Great Tower-st., E.C.

625,789.—Burroughs, Wellcome & Co., Holborn Viaduet, E.C.

625,790.—H. H. Blanchford, Alton, Rohais, Guernsey.

626,032.—C. G. Holloway, 11, Nottingham-st., Melton Mowbray.

626,035.—Rounce & Wortley, Chureh-sq., Cromer.

626,127.—Tokalon, Ltd., 212-214, Great Portland-st., W.

626,129.—Hammersley & Co., Longton.

626,329.—W. M. Still & Sons, Ltd., 29-31, Charles-st., E.C.

626,517-18.—The Art Pottery Co., Waterloo-st., Longton.

626,556.—W. A. Bailey, 148-152, Audrey House, Ely-place, E.C.

626,557.—Allan & Hanburys, Ltd., 48, Wigmore-st., W.

626,706.—Allertons, Ltd., Park Works, Longton.

626,749-50.—W. H. Goss, Falcon Pottery, Stoke-on-Trent.

625,791.—Grimwades, Ltd., Stoke-on-Trent.

625,871.—J. A. King & Co., 181, Queen Vietoria-st., E.C.

625,873-6.—H. T. Robinson, Wolfe-st., Stoke-on-Trent.

626,034.—The Soho Pottery, Ltd., Waterloo-rd., Cobridge.

626,466-7.—Glassworks Josef Inwald A.G., 69, Farringdon-rd., E.C.

626,519.—W. H. Grindley & Co., Woodland Pottery, Tunstall.

626,520-22.—H. Gravill, 229, Marlborough-avenue, Hull.

626,798-801.—The Worcester Porcelain Co., Ltd., Worcester.

626,802.—M. Howlett & Co., 140, Hoekley Hill, Birmingham.

626,852.—Theisen & Cie, 242, Industriestrasse, Crefeld, Germany. Address for Service c/o G. Shaw & Co., 25, Temple-Row, Birmingham.

626,967-8.—Grimwades, Ltd., Stoke-on-Trent.

627,050.—Johnsen & Jorgensen, Ltd., 26-27, Farringdon-street, E.C.

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TRADE  MARK.

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HIGHEST GRADES AND PERMANENT SUPPLIES.

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Faïence, Terra-Cotta, Fireproof and :: :: General Household and Commercial Wares. ::

Price Lists are issued of all Stock Lines.

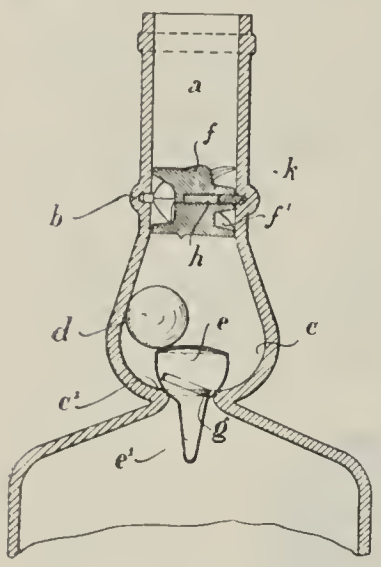
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Latest Complete Specifications.

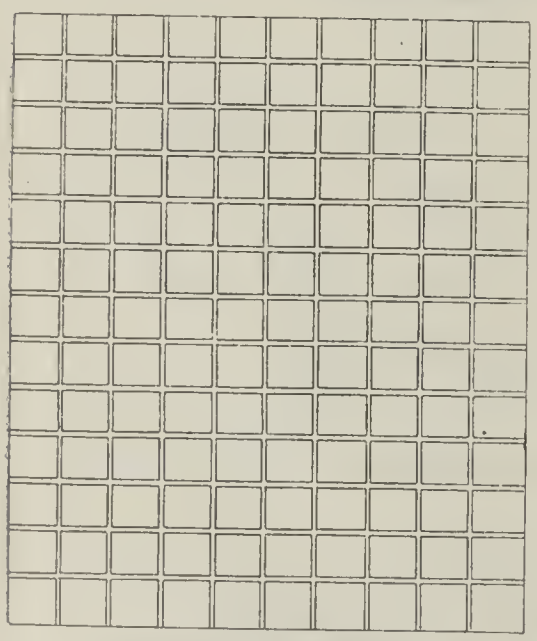
Articles of Ceramic Refractory Material.—Dr. Graf B. Schwerin, of 35, Holbeinstrasse, Frankfurt a M., Germany, claims :—A modification of the manufacture described in Specification No. 2,626 of 1911, which consists in making ceramic refractory articles from materials which by nature are not plastic, by working such materials in a colloidal condition.

Non-Refillable Bottles.—H. Eberhard, of Kohlenberggasse 6, Basle, Switzerland, claims :—(1) In a bottle having a neck the combination of a valve-seat in said neck ; a buoyant valve comprising a hollow head, and a stem joined to said head, said valve head fitting on said seat, a ball-weight in said neck above said valve ; and a tumbling weight in said hollow valve head, arranged to tumble against the roof of said head when the bottle is inverted. (2) A non-refillable bottle comprising the elements set forth in claim 1, the weight of the valve head comprising approximately two-thirds of the total weight of the valve. (3) A non-refillable bottle comprising the elements set forth in claim 1, the valve-head tapering towards the valve stem, and the tumbling weight consisting of a disc, whereof the diameter exceeds the diameter of the valve-stem, but is less than the diameter of the roof of the valve-head.

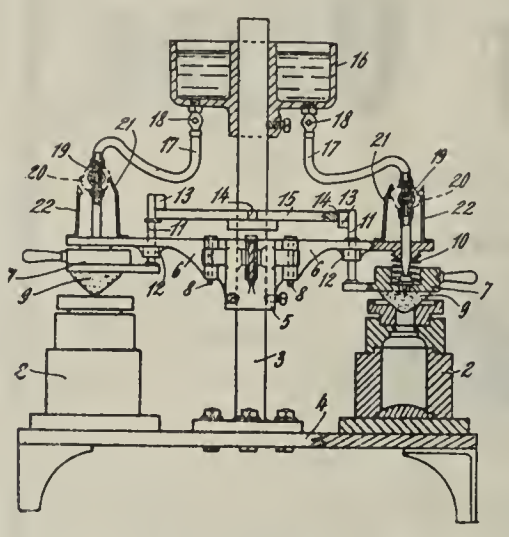


Decoration of Glassware.—F. I. Gibbs, of 140, Hurst-st., Birmingham, claims :—Improved method of decorating glass and glassware consisting in first rendering the desired surface or design of the same tackey by a suitable non-coloured adhesive, then dusting over this tackey surface in finely powdered form, the desired mineral or other colour or colours mixed with " soft flux " until the said tackey surface or design is fully charged, and ultimately, when dry, firing the article in such a temperature as will melt the colour or colours and the " soft flux," mixed therewith sufficiently to cause them to adhere to and be incorporated with the glass surface and form an immovable part of the same.

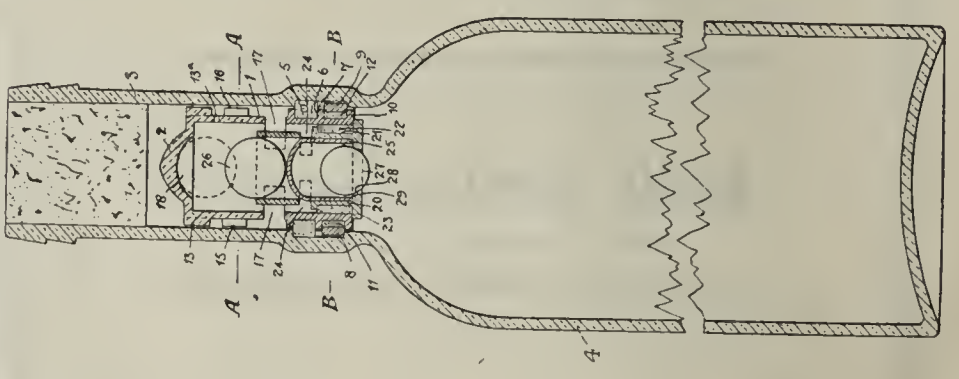
Production of Mosaics.—A. Muggia, of 135, Via Giovanni Lanza, Rome, claims :—A process for the production of mosaics by means of coloured transparent substances (glass or other), characterised by the fact that the plate of glass, or of any other transparent substance, is first of all painted with the picture to be reproduced, then covered with resinous mixture, then dried, coated with cement and oil, and then cut in such a way as to produce small pieces having a regular shape, and the same plate is then re-composed by sticking the said pieces to a resisting bottom, for the purpose of imitating mosaic and composing therewith pictures, ornamental structures and advertising boards, as well as for covering walls and floors.



Apparatus for Finishing Hollow Glass Ware.—The A.G. Glashüttenwerke Adlerhütten, of Penzig, near Görlitz, Germany, through A. E. Edwards, of Chancery-lane Station chambers, W.C., claim :—(1) Apparatus for finishing hollow glass ware that has undergone preliminary pressing, by means of steam generated by the heat of the glass from a moisture-containing pad, covering the finishing mould, characterised by the fact that the pad (9) which closes the finishing mould (2) is automatically supplied during each operation of the apparatus with the amount of liquid to be evaporated, this being effected by causing the opening and closing movement of the cock (19) which controls the supply of the liquid, to be dependent on the opening and closing movement of the cover of the mould or vice versâ. (2) Apparatus is in accordance with the preceding claim, characterised by the fact that the cover (7, 9) of the mould, which can be raised against the action of a spring (10), and moved aside out of its working position, is connected with a detent (13) which, when the cover is in its position of closure, engages with the recess (14) of a rigidly mounted disc (15), and when the cover is turned aside bears against the edge of the disc, and is thus maintained in the raised position. (3) Apparatus in accordance with the first preceding claim, characterised by the fact that the lower end of each pipe (17) the upper end of which is flexible, and through which the liquid is supplied to the cover (7), is attached to this cover and is provided with a cock (19), the plug of which is rotated through an angle of 90 deg. by means of pawls (22 and 21) actuated by the raising and lowering of the cover of the mould. (4) Apparatus in accordance with the first preceding claim, characterised by the fact that the liquid supply pipe (17) is supported in front of the movable cover (7), and that when the cover (7) is in the raised position the lower end of this pipe is closed by means of a plate (25) attached thereto.



Non-refillable Bottle.—C. F. Davy and T. Richardson, both of Fitzroy, Taranaki, New Zealand, claim :—(1) A non-refillable bottle, wherein the piston member within the sleeve is of cup-like formation and fits over a floating ball which acts as a valve and engages a valve seat at the lower end of the sleeve. (2) In a non-refillable bottle



as claimed in Claim 1, a cylinder having a groove holding crescent-shaped members which project into a recess formed in the neck of the bottle. (3) In a non-refillable bottle as specified in Claims 1 and 2, the use in combination with the crescent-shaped members, of resilient pads behind the said members, to pass them into the recess formed in the neck of the bottle.

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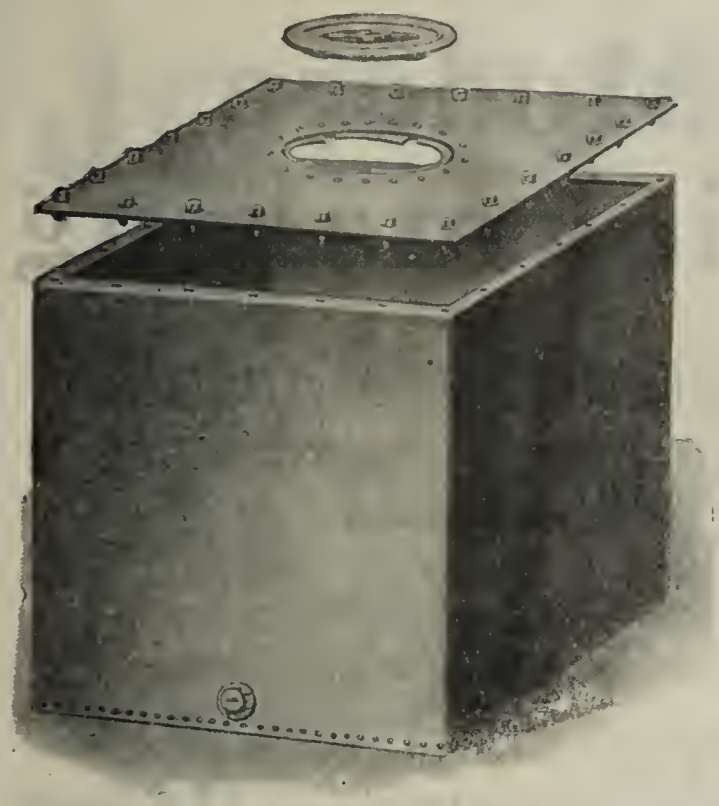
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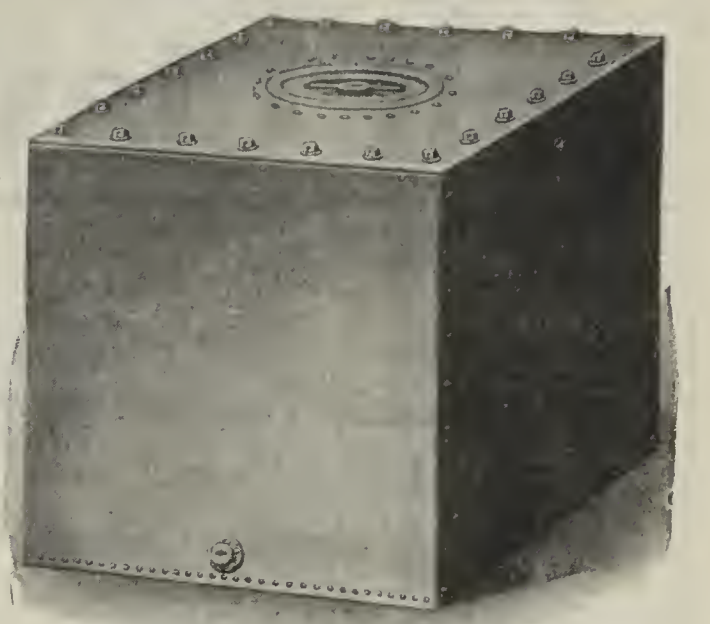
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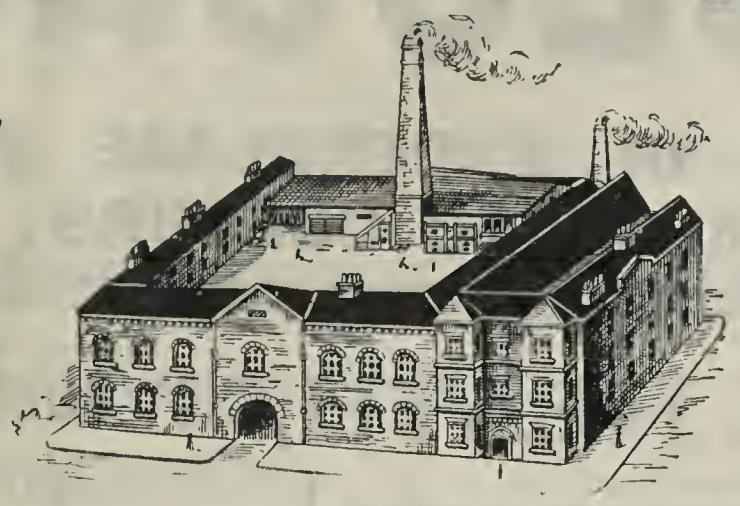
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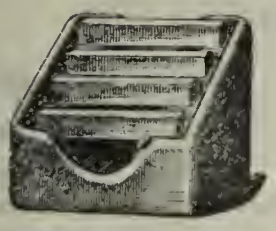
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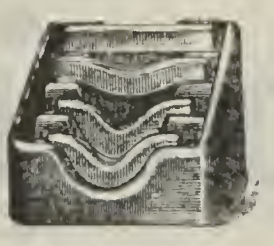
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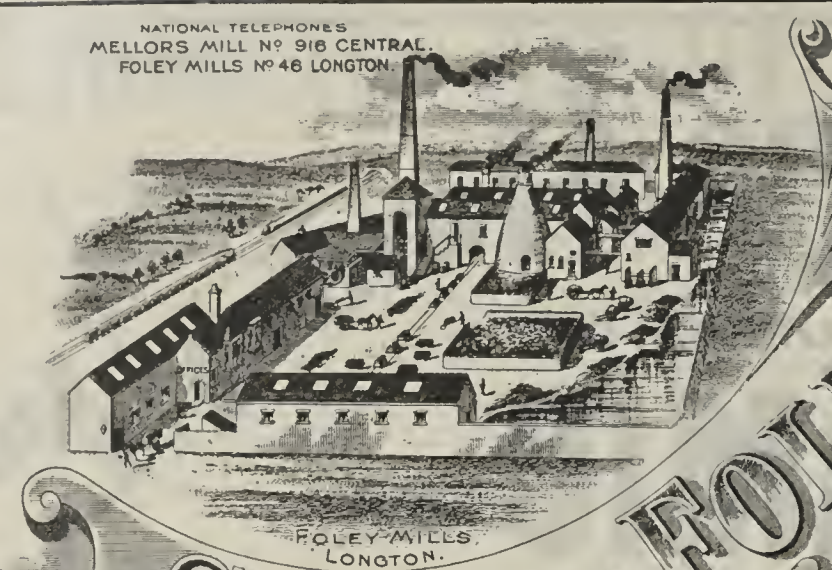
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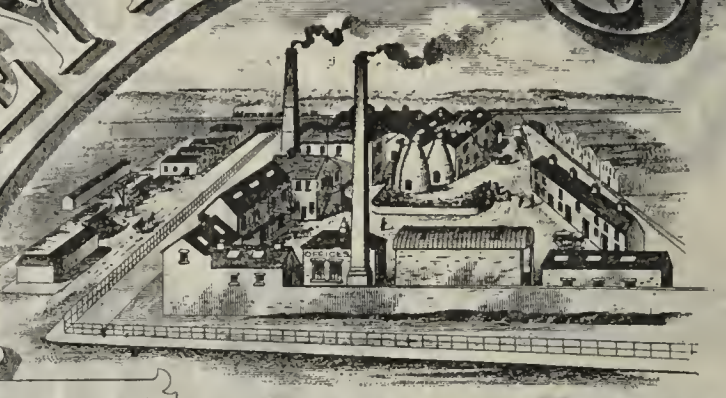


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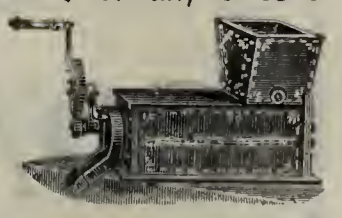
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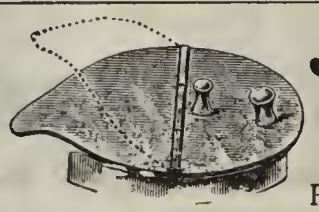
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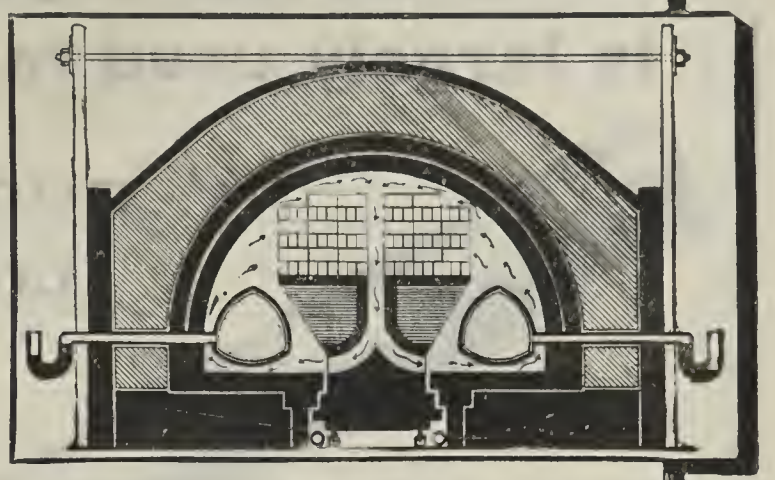
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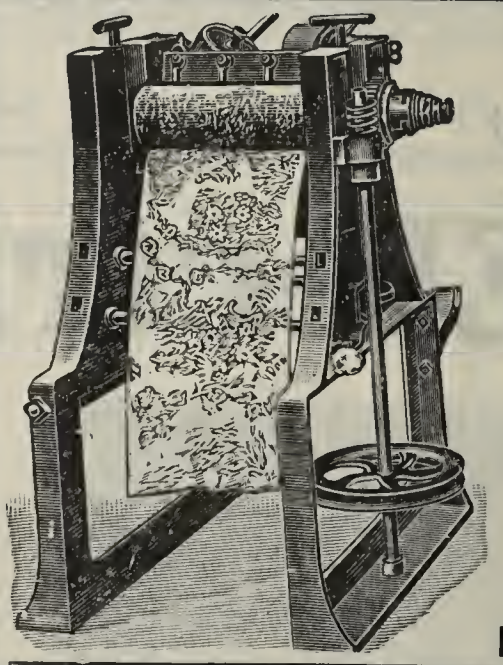
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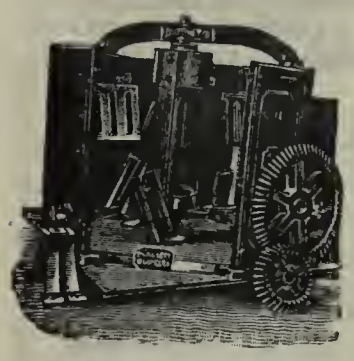
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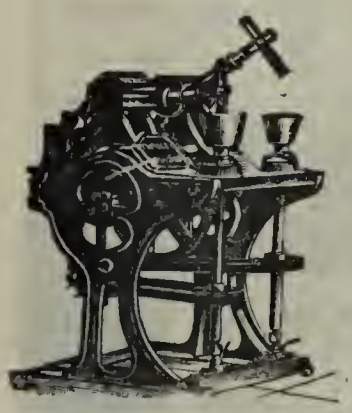
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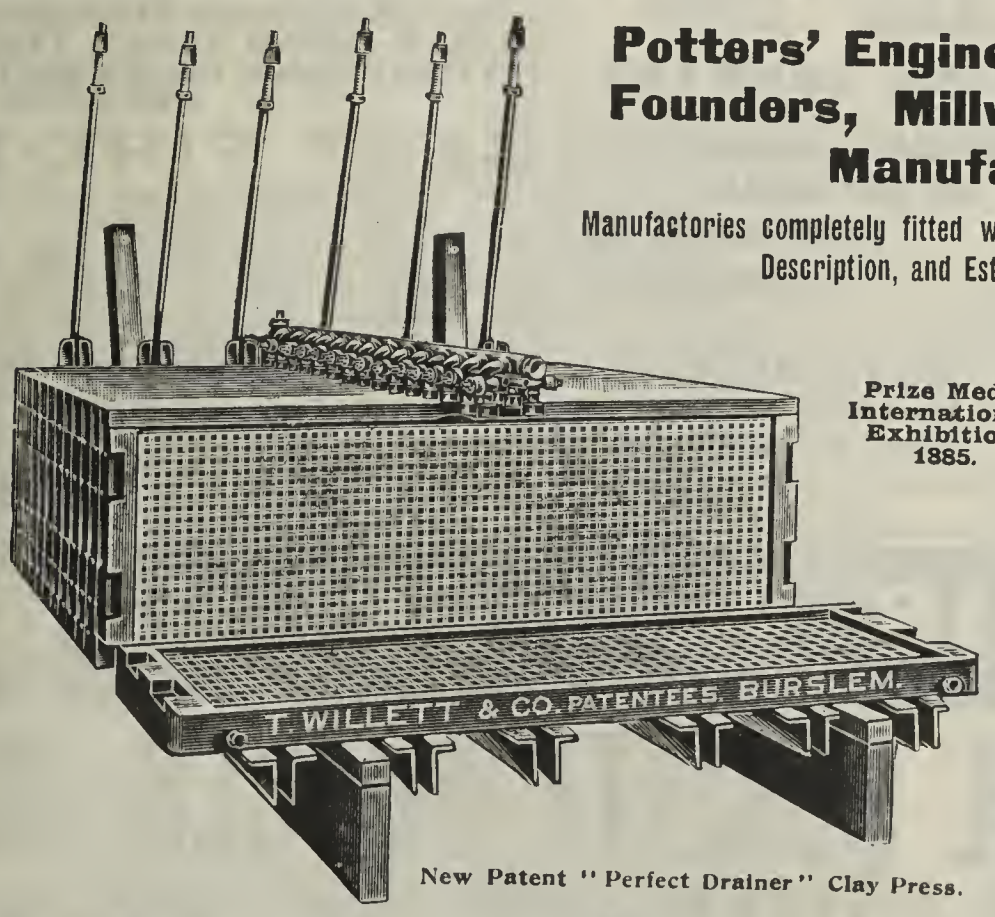
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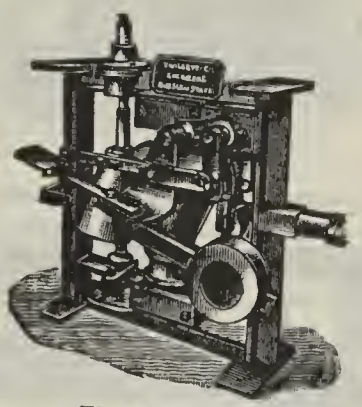


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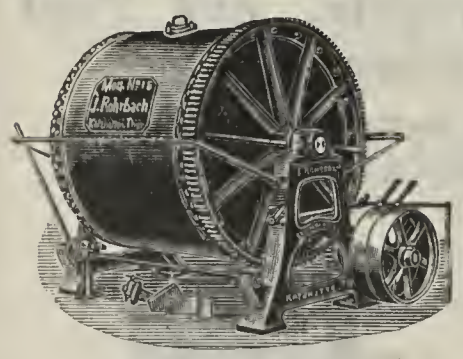
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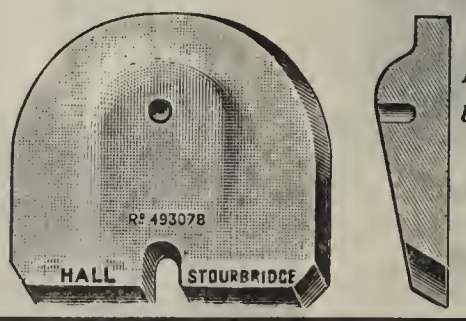
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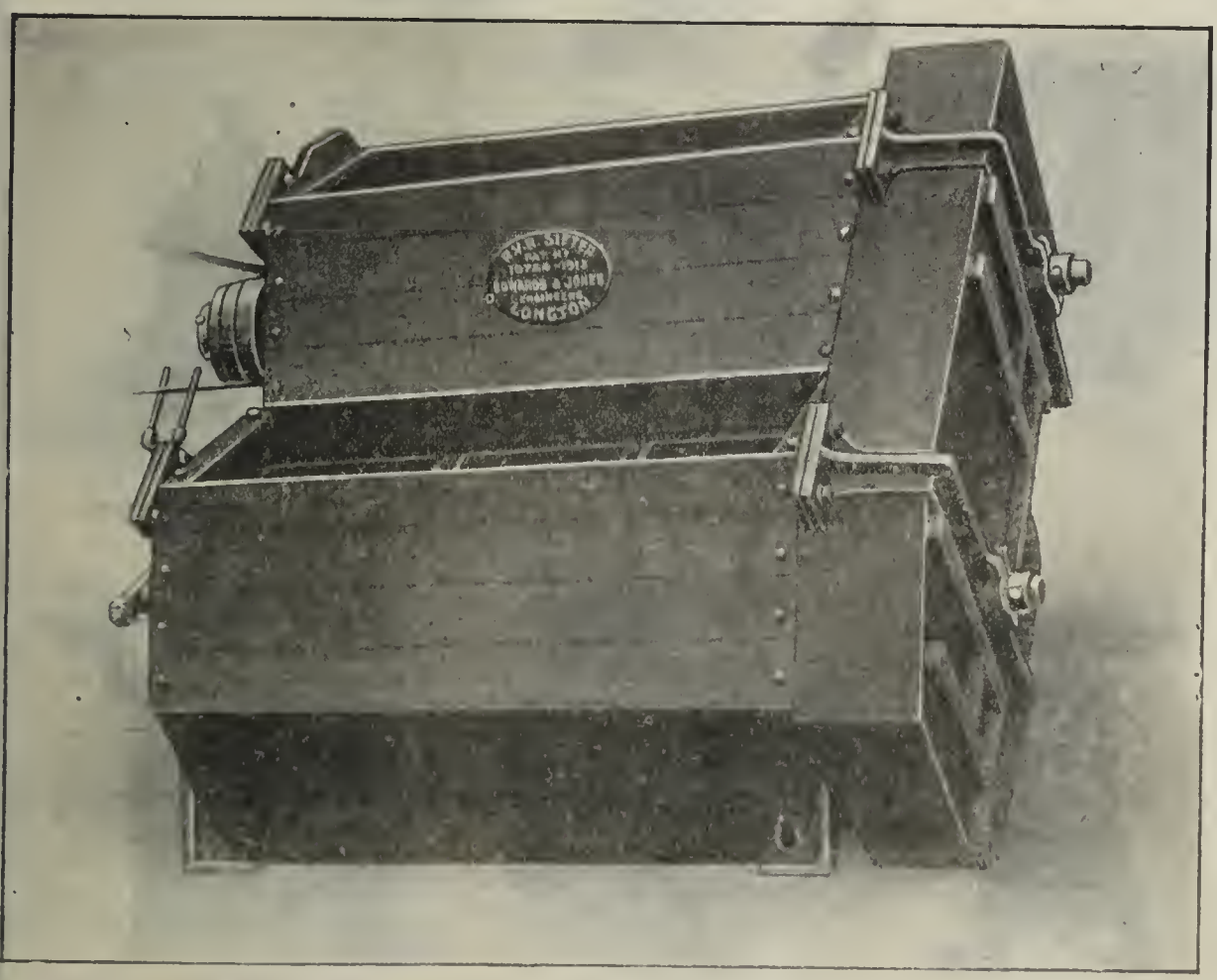
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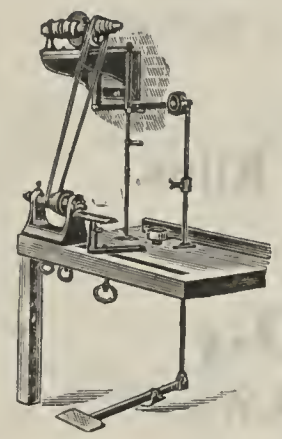
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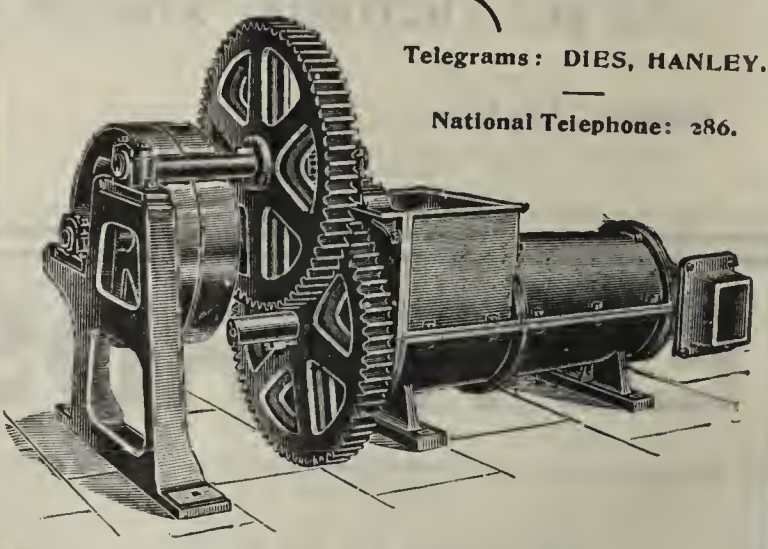
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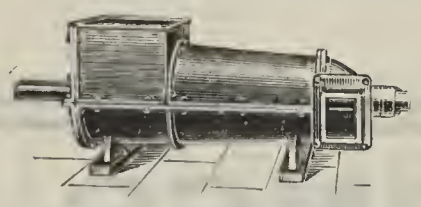
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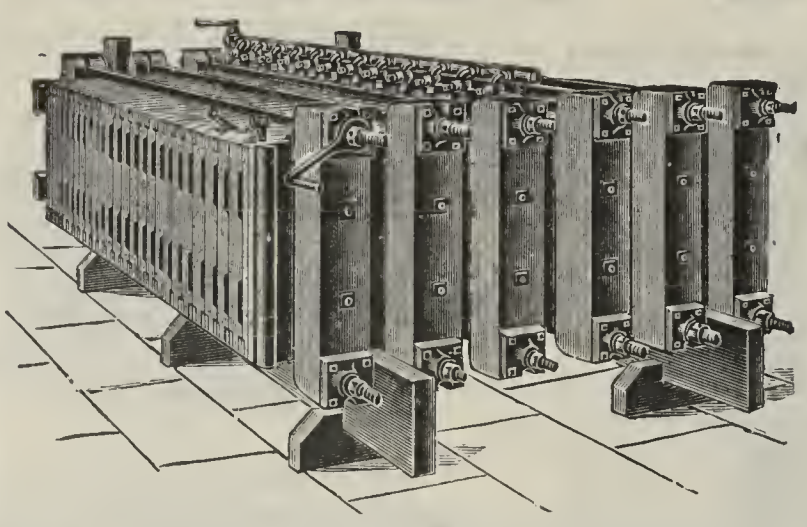
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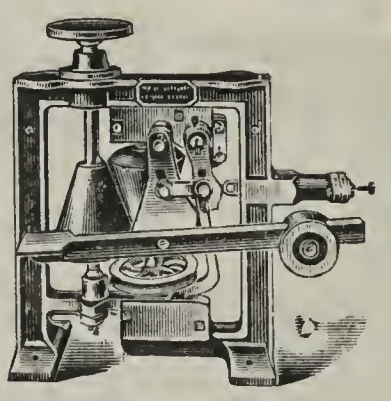




Pug Mill (without Gearing).

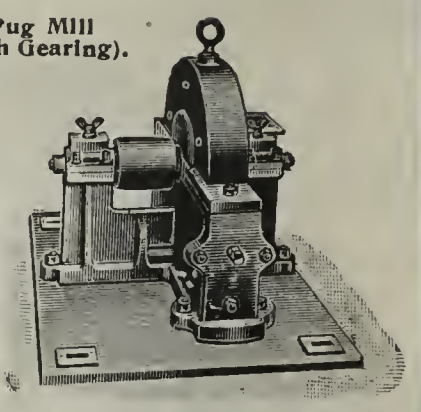


Filter Press.

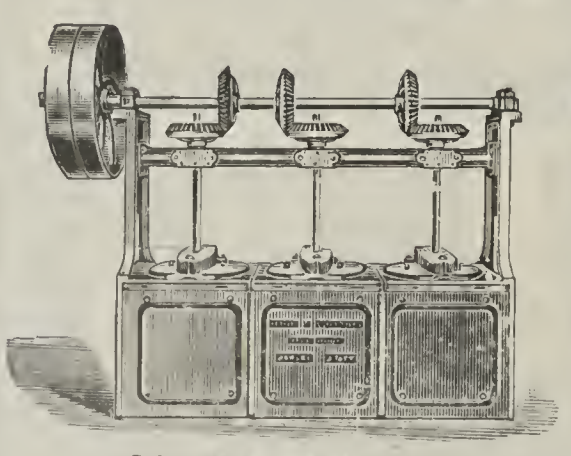


Throwing Wheel.

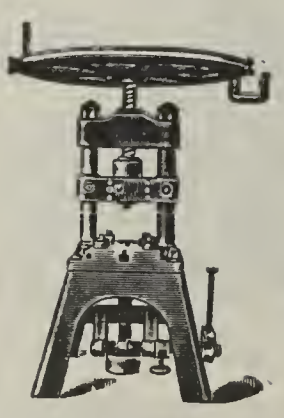
Pug Mill (with Gearing).



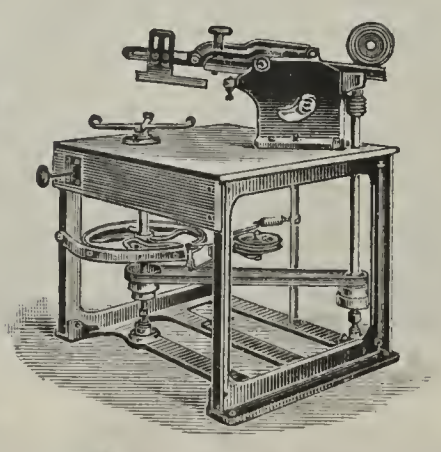
Damped Clay Disintegrator or Dust Mill.



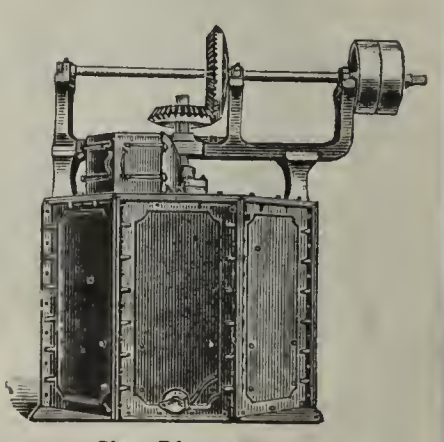
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[1]

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